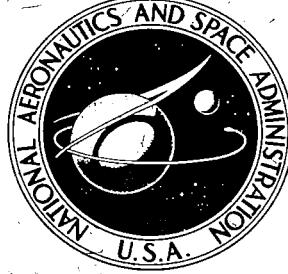


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OPACITY PROBABILITY DISTRIBUTION
FUNCTIONS FOR CARBON MONOXIDE
AT ELEVATED TEMPERATURES

by Virgil G. Kunde

Goddard Space Flight Center
Greenbelt, Md.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION • WASHINGTON, D. C. • FEBRUARY 1970

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ABSTRACT

Opacity probability distribution functions have been obtained from computed theoretical spectra of $\text{C}^{12}\text{O}^{16}$ at temperatures of 1680° , 2016° , 2520° , and 3360°K and at turbulent velocities of 0, 2, and 8 km sec^{-1} . Spectral intervals of 100 cm^{-1} were chosen for the fundamental (1000 - 2400 cm^{-1}), the first-overtone (2400 - 4400 cm^{-1}), and the second-overtone (4500 - 6500 cm^{-1}) band regions. The theoretical spectra of the line absorption coefficient were computed with each absorption line considered individually. Approximately 4200 molecular lines were included for each absorption band.

With only Doppler and turbulent line broadening considered, the CO line absorption coefficient is essentially zero over a significant fraction of the spectrum. This is due to the relatively large line separation ($\sim 4 \text{ cm}^{-1}$ for a rigid rotator) and to the rapid decrease of the Doppler wings. Thus the spectra, and consequently the opacity probability distribution functions, are characterized by an absorption coefficient which varies through many orders of magnitude. A second trend evident in the opacity probability distribution functions is the closing of the spectral gaps with increasing temperature and/or turbulent velocity.

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OPACITY PROBABILITY DISTRIBUTION FUNCTIONS FOR CARBON MONOXIDE AT ELEVATED TEMPERATURES

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INTRODUCTION

The occurrence of the molecules H_2O and CO in late-type stellar atmospheres is now well-established. These molecules have been identified from ground-based infrared observations by Boyce and Sinton (1964, 1965), Sinton (1966), Kuiper (1963, 1964), McCammon, Munch, and Neugebauer (1967), Mertz (1967), and Connes (1968), and from the balloon spectra of Stratoscope II (Woolf, Schwarzschild and Rose, 1964). These observations have indicated that the line absorption of H_2O and CO play an important role in determining both the physical state of the atmosphere and its emergent spectrum. This investigation is concerned primarily with the molecular absorption of stellar CO.

Exploratory model atmospheres, including the molecular absorption of H_2O , have been constructed by Tsuji (1966b, 1968), Carbon, Gingerich, and Latham (1968), and Auman (1966, 1968a) for the late-type stars. The molecular absorption was approximated by a smeared line model (Tsuji, 1966b), by a two parameter statistical method (Tsuji, 1968) and by a harmonic mean (Auman, 1966, 1967a). The models of Carbon, Gingerich, and Latham are based on Auman's harmonic mean for H_2O . Only the models of Tsuji include the molecular line absorption of CO.

A more sophisticated and promising method for handling molecular absorption in late-type model atmospheres is a statistical treatment outlined by Strom and Kurucz (1966) and Mihalas (1967). This treatment has the advantages of 1) being based on accurate monochromatic absorption coefficients including effects of line overlapping, 2) retaining information on the magnitude of the absorption coefficient (only spectral content is lost), and 3) being a tractable solution to the problem of including line absorption in late-type model atmospheres. In the statistical treatment the monochromatic line absorption coefficient occurring within a specified spectral interval is represented by an opacity probability distribution function. Strom and Kurucz (1966) have applied this technique to the star Procyon (F5 IV); Tsuji (1968) used a somewhat similar statistical treatment for his M dwarf-star model atmospheres. Auman (1967a, b) computed opacity probability distribution functions for H_2O , which were then used to determine harmonic means. However, Auman (1968b) indicated that his future models will include molecular opacities in the form of opacity probability distribution functions.

It is the purpose of this paper to determine opacity probability distribution functions for CO for inclusion in Auman's model atmospheres. Opacity probability distribution functions have been obtained from computed theoretical spectra of $\text{C}^{12}\text{O}^{16}$ at temperatures of 1680° , 2016° , 2520° , and 3360°K and at turbulent velocities of 0.2 and 8.0 km sec^{-1} . Spectral intervals of 100 cm^{-1} were chosen for the fundamental (1000 to 2400 cm^{-1}), the first-overtone (2400 to 4400 cm^{-1}), and the second-overtone (4500 to 6500 cm^{-1}) band regions. In this manner the effect of CO on the atmospheric structure and emergent spectrum of a late-type atmosphere can be determined.

It should be noted that a much higher spectral resolution is required for spectrum analysis than for the construction of model atmospheres. Current model atmosphere programs are capable of spectral resolution of the order of 100 cm^{-1} , which should be adequate for determining atmospheric models. However, this resolution is not always adequate for spectrum analysis, as the observational state of the art in spectral resolution is of the order of 0.2 cm^{-1} (Connes, 1968; Augason, 1968). Proper interpretation of high-resolution stellar spectra of this type requires special integration techniques that consider each spectral line individually.

MOLECULAR LINE ABSORPTION COEFFICIENT

The first step in deriving the opacity distribution function for a given interval is to establish the monochromatic line absorption coefficient for the interval.

Monochromatic Absorption Coefficient

An absorption line can be fully described by the center wave number ν_0 , the half-width α , the line shape b , and the intensity S . The line intensity is subject to the normalization condition

$$S = \int_{-\infty}^{+\infty} \xi_\nu d\nu . \quad (1)$$

where ξ_ν is the monochromatic absorption coefficient at wave number ν . In terms of the above parameters, the monochromatic absorption coefficient for a single line is

$$\xi_{\nu_i}(P, T, \xi_t) = S_i(T)b(\nu - \nu_{0_i}, P, T, \xi_t) , \quad (2)$$

where P is pressure, T is temperature, and ξ_t is the turbulent velocity. The determination of the parameters ν_0 , α , b , and S for CO has been described previously (Kunde, 1968).

As an aid in making the numerical approximations it is necessary to consider the line shapes germane to this investigation. The pressure-broadened Lorentz line shape is

$$b(\nu - \nu_0, \alpha_c(P, T)) = \frac{\alpha_c}{\pi} \frac{1}{(\nu - \nu_0)^2 + (\alpha_c(P, T))^2} , \quad (3)$$

where α_c is the pressure-broadened half-width. The pressure and temperature dependence of α_c is given by

$$\alpha_c(P, T) = \alpha_c(P_0, T_0) \sqrt{\frac{T_0}{T} \frac{P}{P_0}}, \quad (4)$$

where $\alpha_c(P_0, T_0)$ indicates the value of α_c at reference conditions. The half-width $\alpha_c(P_0, T_0)$ has previously been described as a function of rotational quantum number (Kunde, 1968). The Doppler line shape is

$$b(\nu - \nu_0, \alpha_D) = \frac{\sqrt{\ln 2}}{\alpha_D \sqrt{\pi}} \exp \left[\frac{-(\nu - \nu_0)^2 \ln 2}{\alpha_D^2} \right], \quad (5)$$

where α_D is the Doppler half-width at half-maximum,

$$\alpha_D = 3.58 \times 10^{-7} \sqrt{\frac{T}{M}} \nu_0, \quad (6)$$

with M the molecular weight. The mixed Lorentz-Doppler line shape is given by the following expression (Young, 1965):

$$b(\nu - \nu_0, P, T) = \sqrt{\frac{\ln 2}{\pi}} \frac{1}{\alpha_D} H(a, u), \quad (7)$$

where

$$a = \alpha_c / \alpha_D \sqrt{\ln 2}, \quad (8)$$

$$u = \nu - \nu_0 / \alpha_D \sqrt{\ln 2}. \quad (9)$$

The function $H(a, u)$ has been evaluated following a numerical scheme developed by Young (1965). The line half-width due to thermal and turbulent broadening was assumed to be

$$\alpha_t = \frac{\nu}{c} \sqrt{\frac{2kT}{M} \ln 2 + \xi_t^2 \ln 2}, \quad (10)$$

where ξ_t is the turbulent velocity.

Line shapes for conditions representative of late-type atmospheres are illustrated in Figures 1 and 2. The wave number chosen for evaluation of the Doppler half-width, $\nu_0 = 2000 \text{ cm}^{-1}$, occurs near the center of the fundamental band. The Doppler half-width in the first- and second-overtone region increases approximately by factors of 2 and 3, respectively, over the value in the

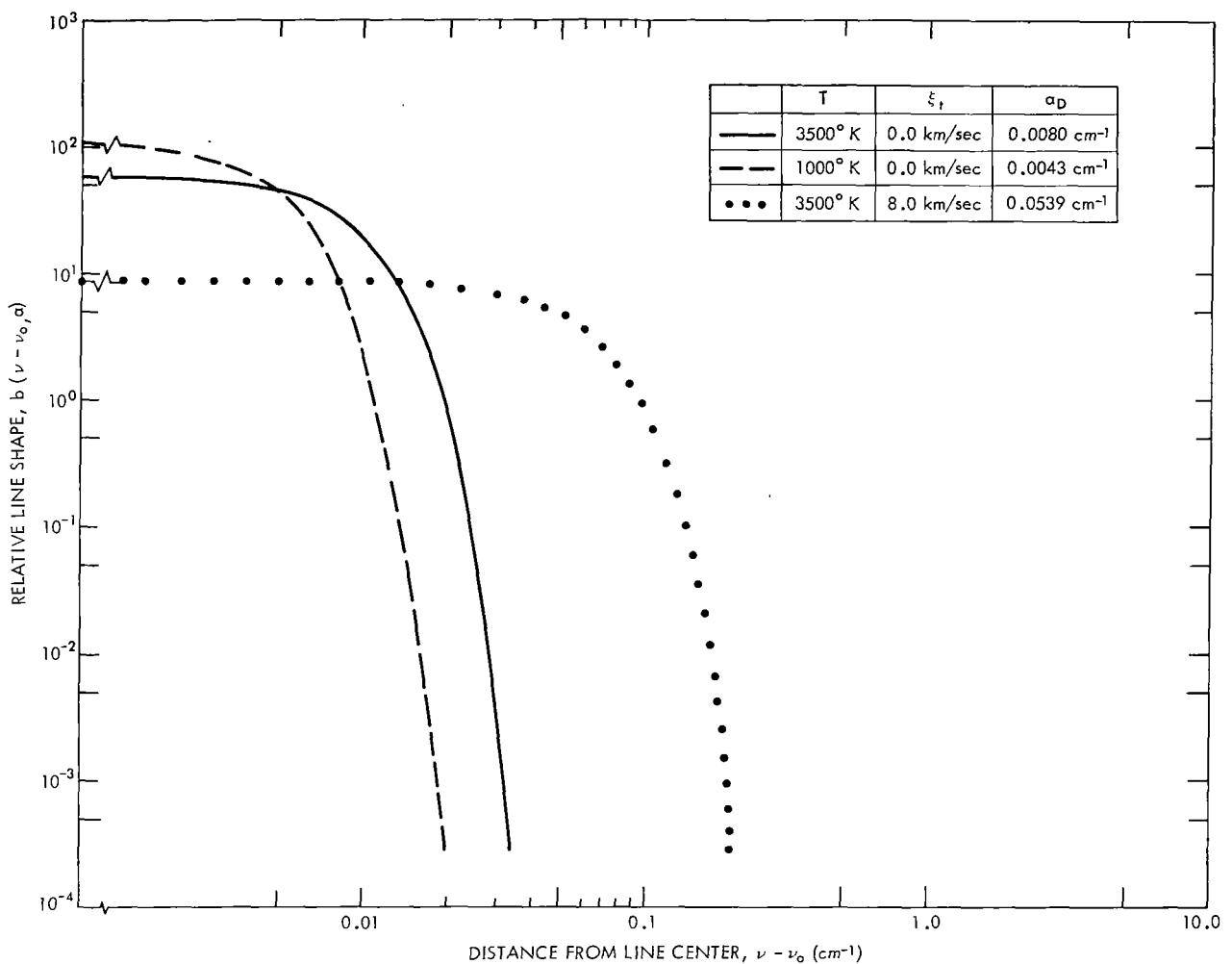


Figure 1—Doppler line-shape for CO at elevated temperatures. The line center is at 2000 cm^{-1} .

fundamental region. Where significant turbulent broadening occurs, this difference is essentially masked over. Figure 1 shows the comparison of line shapes for pure thermal broadening at 1000° and 3500°K . As the line shapes are symmetrical about the line center, only the portion of the line shape for positive $\nu - \nu_0$ is shown. Also included is the line shape at 3500°K and a turbulent velocity of 8 km sec^{-1} . The line shape at 1000°K and a turbulent velocity of 8 km sec^{-1} is nearly identical to the 3500°K case, as the turbulent broadening dominates the thermal broadening. From Figure 1 it can be seen that to accurately define ξ_v near the line center, the wave number mesh must be of the order of 0.01 cm^{-1} . Figure 2 illustrates the effect of pressure broadening on the line shape. Zero-pressure conditions are represented by the mixed Doppler-turbulent line while $a_L = 0.01 \text{ cm}^{-1}$ represents a pressure of approximately one atmosphere. It is evident in Figure 2 that the mixed line shape has essentially a Doppler core with pressure-broadened wings. In the computations the mixed line shape was used for $\nu - \nu_0 < 4 \text{ cm}^{-1}$ and the Lorentz line shape was used for $\nu - \nu_0 > 4 \text{ cm}^{-1}$. In the actual computations the Benedict modification of the Lorentz line shape was used (Kunde, 1968).

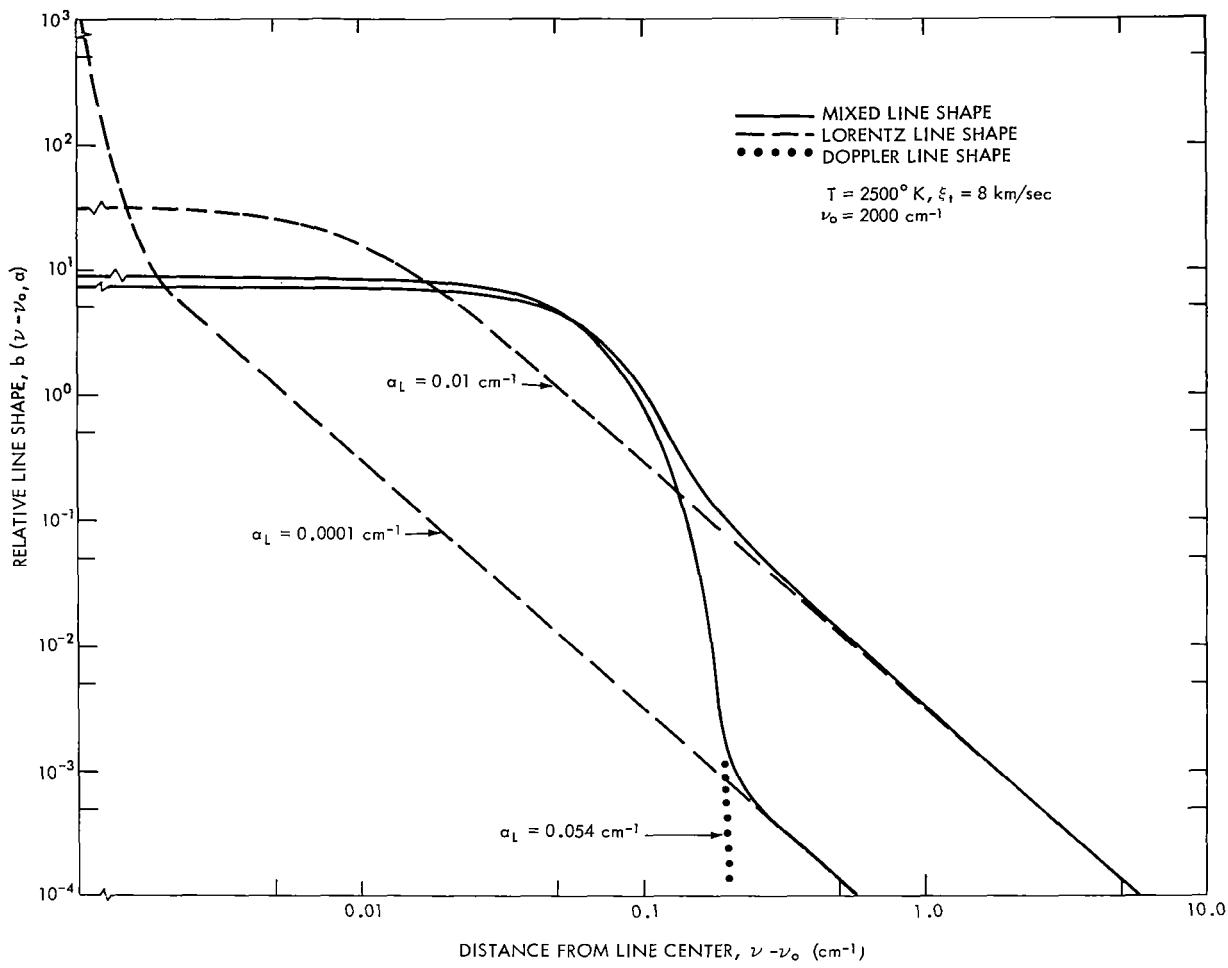


Figure 2—Various line-shapes for CO at $T = 2500^\circ\text{K}$, $\xi_t = 8 \text{ km sec}^{-1}$, and $\nu_0 = 2000 \text{ cm}^{-1}$.

The total monochromatic line absorption coefficient at ν is the sum of the contributions of all the individual molecular lines

$$\ell_\nu = \sum_i^N \ell_{\nu_i} . \quad (11)$$

The numerical procedure for deriving the monochromatic line absorption coefficient, using a variable wave-number mesh, is similar to the procedure described previously (Kunde, 1968). In this investigation only the lines of $\text{C}^{12}\text{O}^{16}$ were considered.

Several typical spectra of the total monochromatic absorption coefficient are shown in Figures 3 and 4. The conditions represented in Figure 3 are:

Figure 3a - $T = 3360^\circ\text{K}$, $\xi_t = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$,

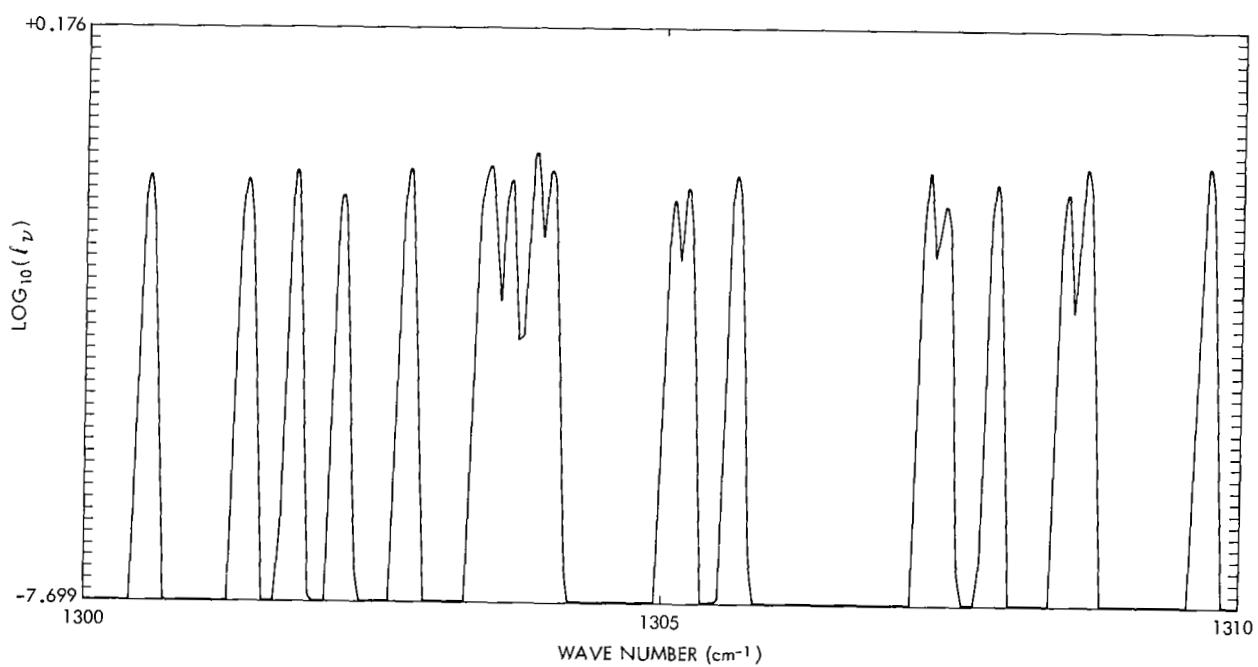
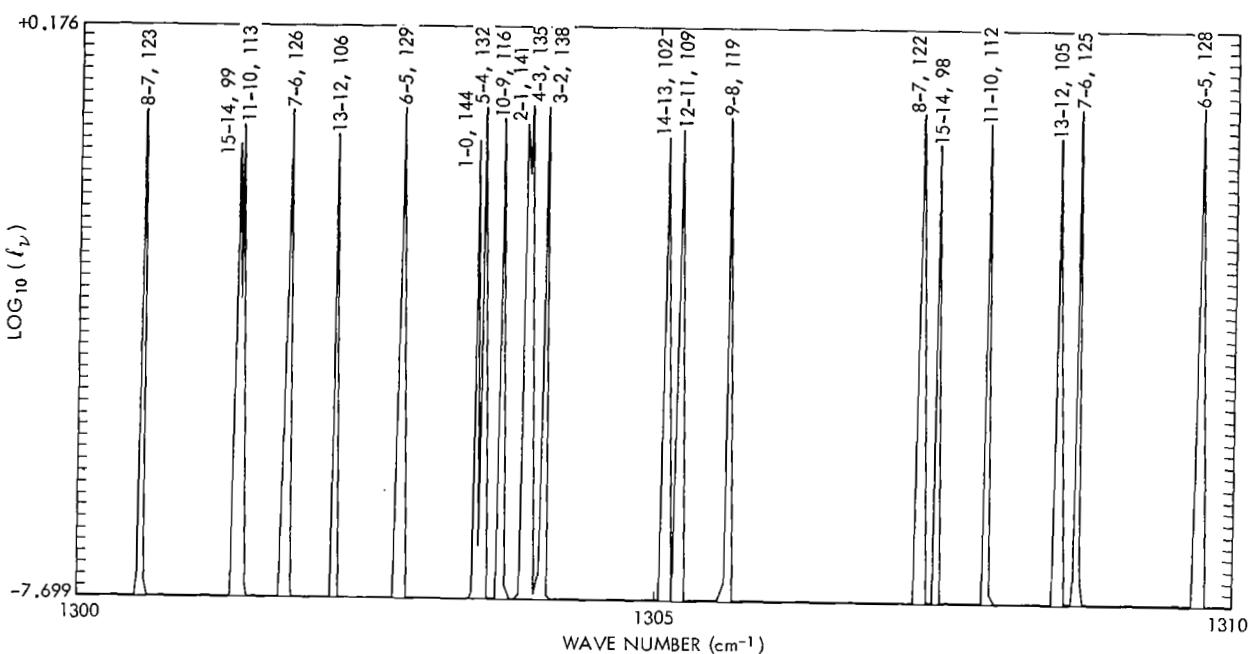


Figure 3—Logarithmic monochromatic absorption coefficient for the fundamental band of CO from 1300 to 1310 cm^{-1} at 3360°K. The logarithmic sub-internal spacing is 0.1575. The individual lines are identified by the vibrational transition and the quantum number of the lower rotational level.

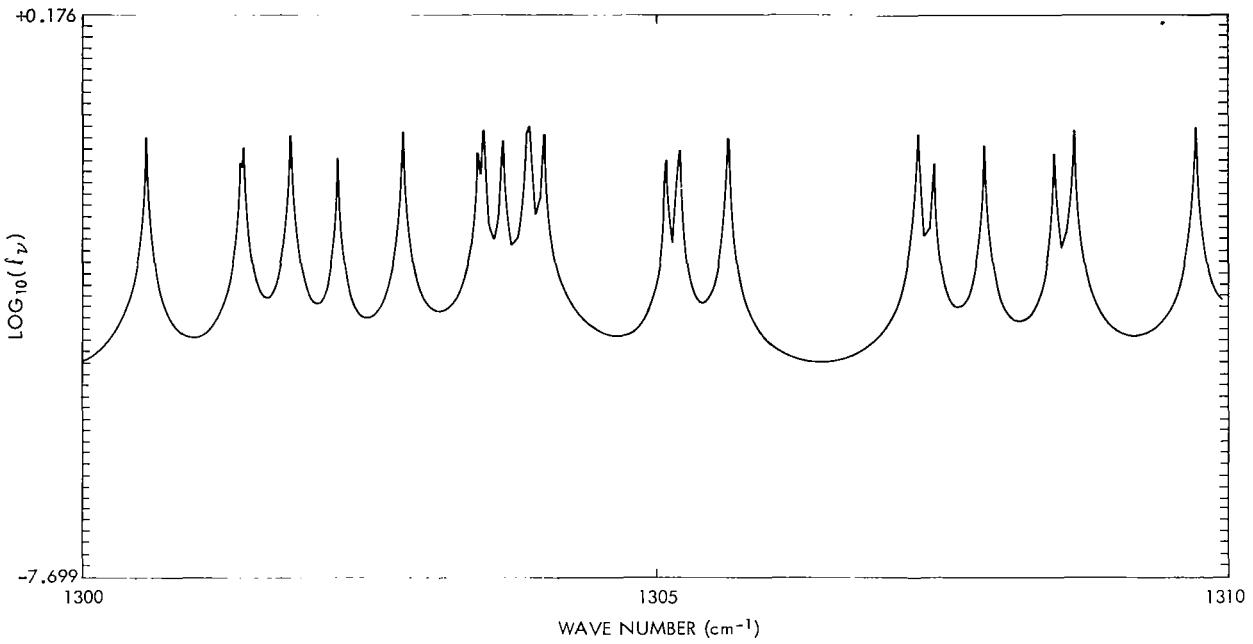


Figure 3 (continued)—Logarithmic monochromatic absorption coefficient for the fundamental band of CO from 1300 to 1310 cm^{-1} at 3360°K. The logarithmic sub-internal spacing is 0.1575. The individual lines are identified by the vibrational transition and the quantum number of the lower rotational level.

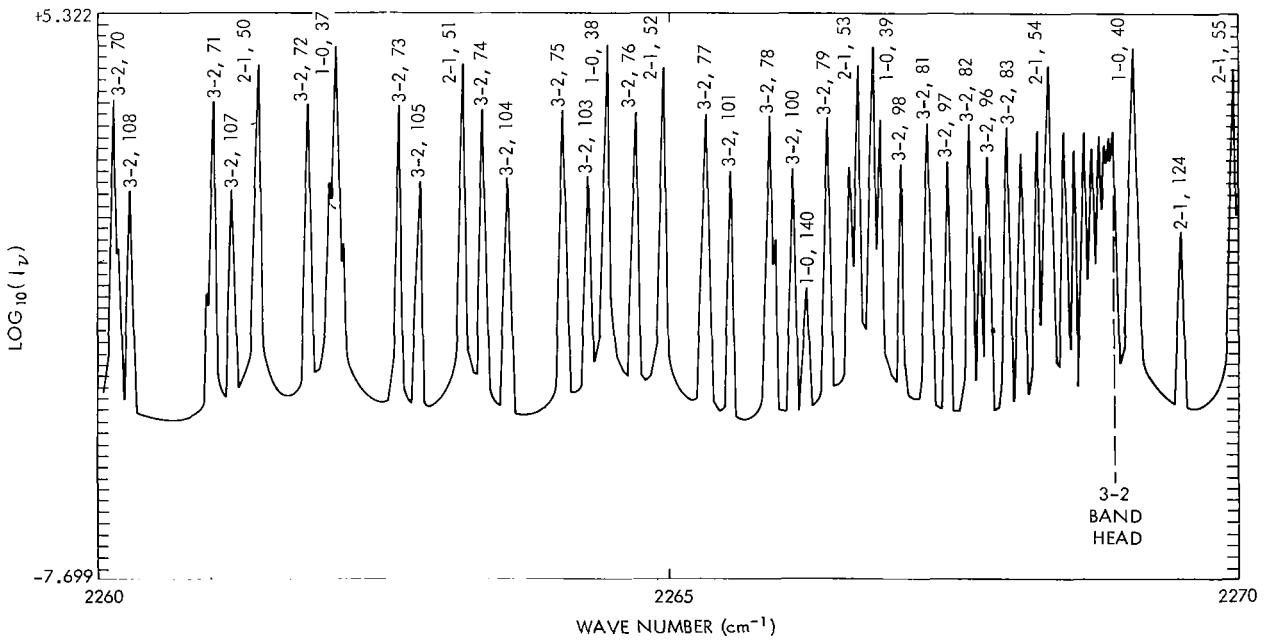


Figure 4—Logarithmic monochromatic absorption coefficient for the fundamental band of CO from 2260 to 2290 cm^{-1} at 3360°K. The logarithmic sub-interval spacing is 0.2604. The individual lines are identified by the vibrational transition and the quantum number of the lower rotational level. $\xi_t = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

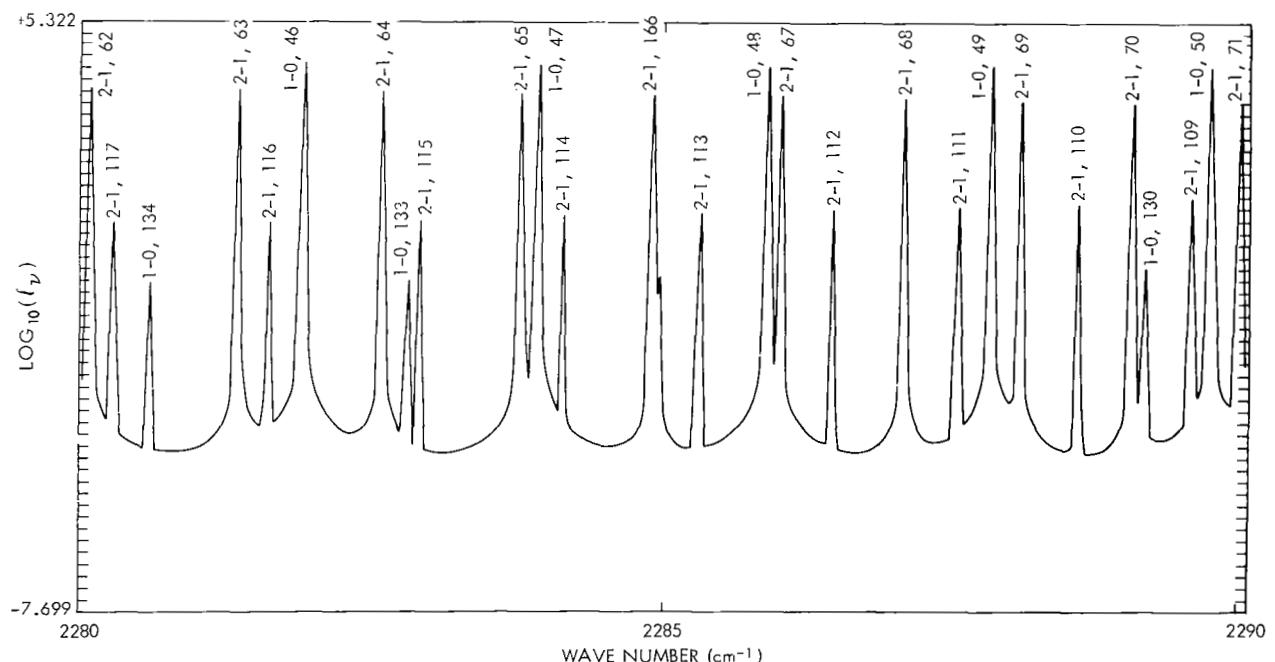
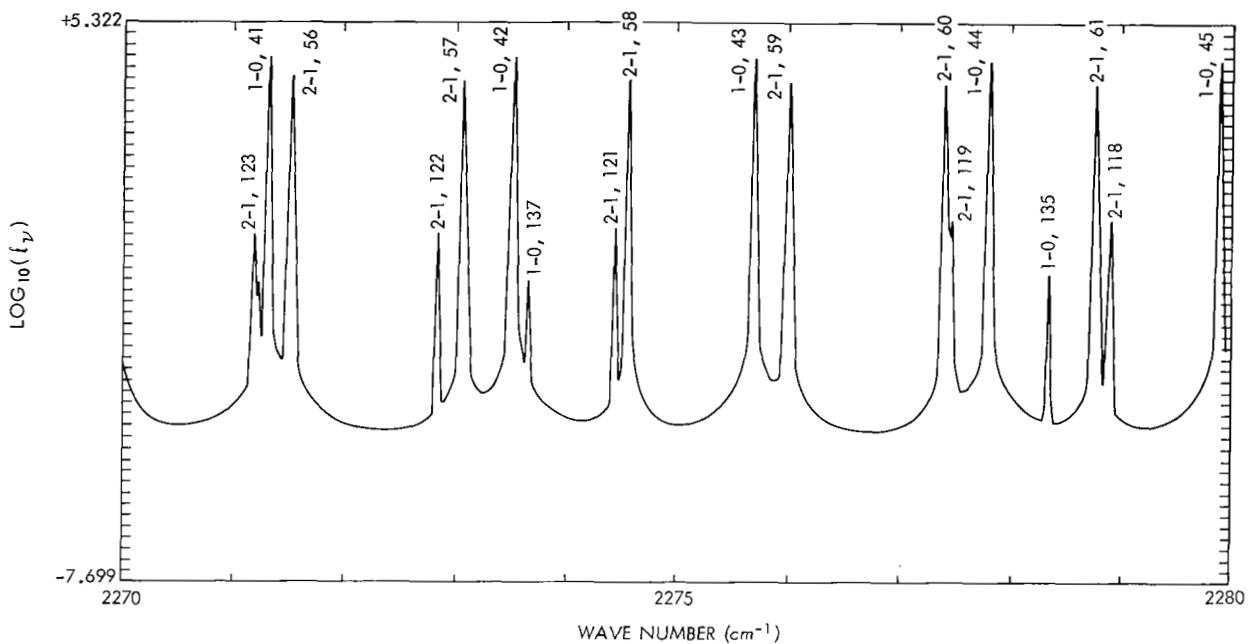


Figure 4 (continued)—Logarithmic monochromatic absorption coefficient for the fundamental band of CO from 2260 to 2290 cm^{-1} at 3360°K. The logarithmic sub-interval spacing is 0.2604. The individual lines are identified by the vibrational transition and the quantum number of the lower rotational level. $\xi_t = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

Figure 3b - $T = 3360^{\circ}\text{K}$, $\xi_t = 8.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$,

Figure 3c - $T = 3360^{\circ}\text{K}$, $\xi_t = 0.0 \text{ km sec}^{-1}$, $P = 10^6 \text{ dynes cm}^{-2}$.

The portion of the spectrum illustrated in Figure 3 occurs in the far wings of the P branch of the fundamental band. The vibrational transition and lower rotational quantum number is denoted in Figure 3a for each absorption line. The peak absorption in this spectral region is lower than the peak absorption in the band by a factor of about 5×10^4 .

In Figure 4, the spectrum from 2260 to 2290 cm^{-1} is illustrated for a temperature of 3360°K , a turbulent velocity of zero, and a pressure of 10 dynes cm^{-2} . This portion of the spectrum occurs near the peak of the 1-0 vibrational band and is typical of the spectrum in the R-branch region.

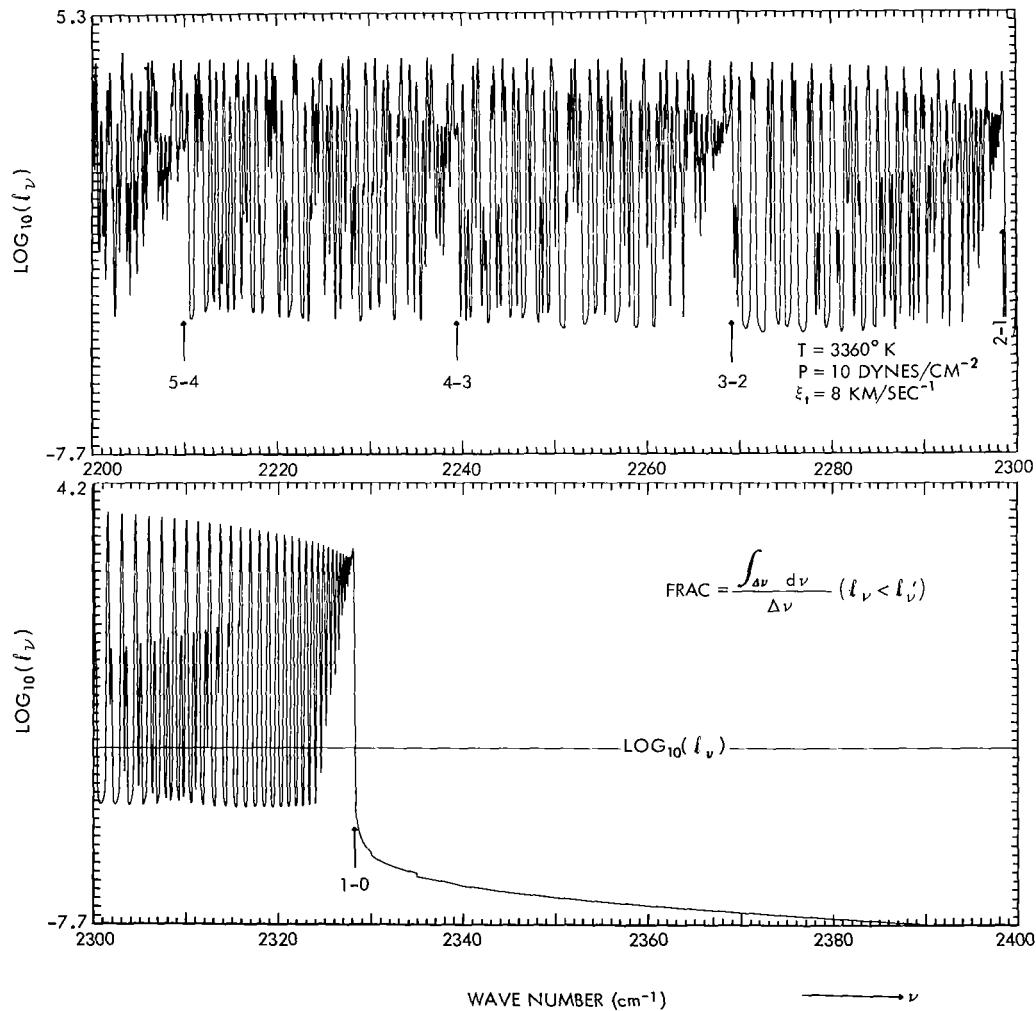


Figure 5—Logarithmic monochromatic absorption coefficient for the fundamental band of CO in the spectral regions 2200 - 2300 cm^{-1} and 2300 - 2400 cm^{-1} at 3360°K . $\xi_t = 8 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

The strongest lines in this region are due to the R-branch lines of the 1-0, 2-1, and 3-2 vibrational bands. The R-branch head for the 3-2 band occurs at 2269 cm^{-1} . It is evident from Figures 3 and 4 that in this spectral region a considerable portion of the spectrum is free of CO molecular-line absorption. This is due to the relatively large line separation ($\sim 4 \text{ cm}^{-1}$ for a rigid rotator) and to the rapid decrease of the Doppler wings.

An example of the theoretical spectra used to generate the distribution functions is shown in Figure 5 for the intervals 2200 to 2300 cm^{-1} and 2300 to 2400 cm^{-1} . These two intervals occur in the R-branch of the fundamental band. The arrows denote the R-branch heads of the vibrational bands. The interval 2200 to 2300 cm^{-1} contains approximately 400 lines.

Average Absorption Coefficient

The average absorption coefficient for a spectral interval of width $\Delta\nu$ is

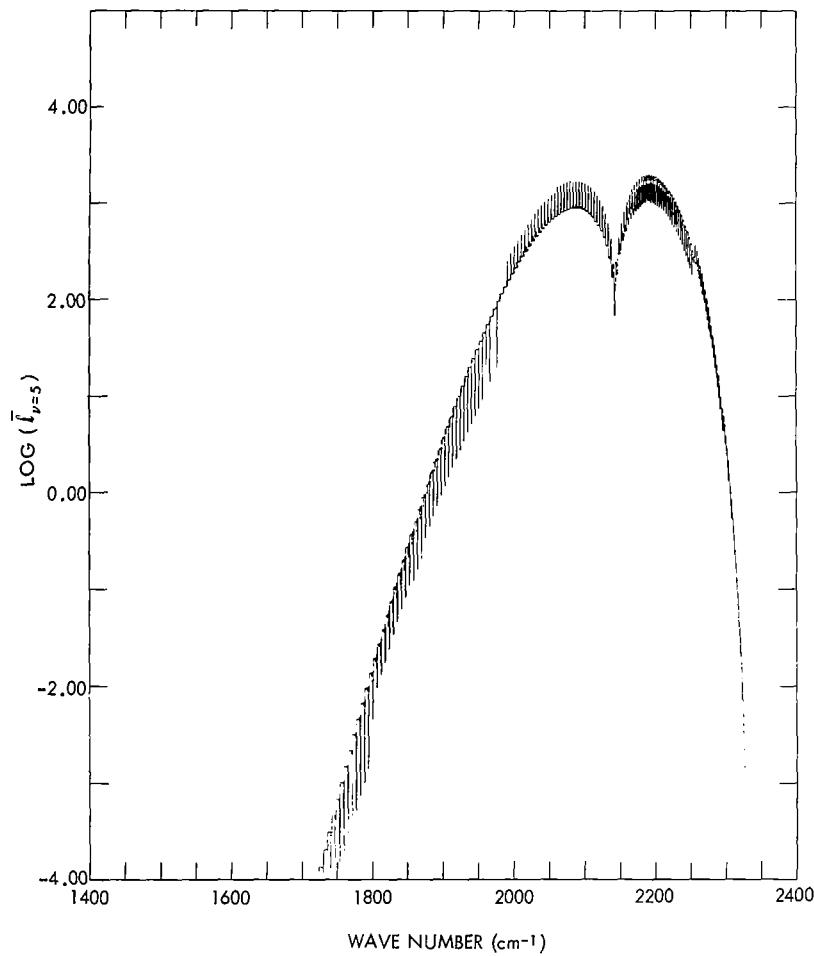
$$\bar{\ell}_{\Delta\nu} = \int_{\Delta\nu} \ell_{\nu} d\nu / \Delta\nu . \quad (12)$$

The average absorption coefficient has been determined for the fundamental band at temperatures of 1000° and 4500°K with $\Delta\nu = 5$ and 25 cm^{-1} . These cases are illustrated in Figures 6 and 7 respectively. At 4500°K the band heads are just becoming evident. The average absorption coefficients for $\Delta\nu = 25 \text{ cm}^{-1}$ for the first- and second-overtone bands are shown in Figures 8 and 9 respectively.

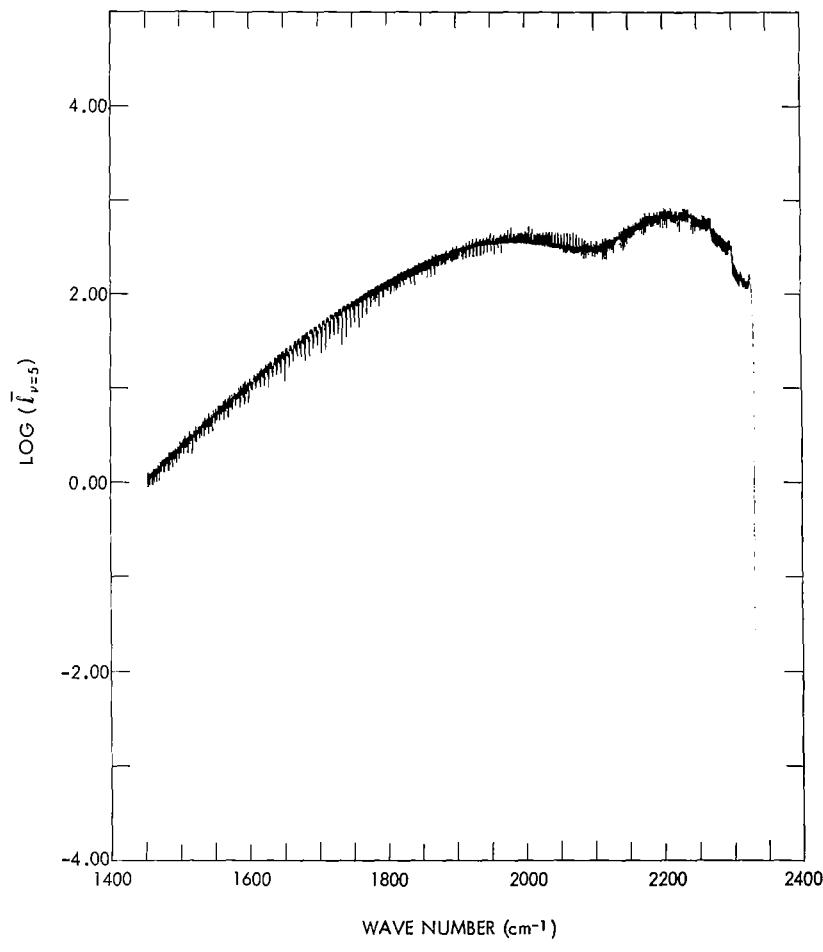
OPACITY PROBABILITY DISTRIBUTION FUNCTION

Introduction

The statistical treatment of molecular absorption described by Strom and Kurucz (1966) and Mihalas (1967) divides the molecular absorption coefficient, in a specified spectral interval $\Delta\nu$, into M sub-intervals, and determines a statistical weight for each sub-interval. The statistical weight represents the fraction of the spectral interval $\Delta\nu$ occupied by ℓ_{ν} , where the limits of ℓ_{ν} are defined by the sub-interval limits. Model atmospheres are then calculated for each sub-interval with the resultant model atmosphere being determined by the appropriate statistical weight being given to the flux from each sub-interval. The distribution of statistical weights as a function of absorption coefficient or of the M sub-intervals is called the "opacity probability distribution function." Strom and Kurucz used the ratio ℓ_{ν}/k_{ν} , where k_{ν} is the continuous absorption coefficient, to determine the statistical weights. In this investigation only the line absorption coefficient will be used. In this manner the opacity probability distribution functions are independent of the continuous absorption. It is a simple manner to convert to the ℓ_{ν}/k_{ν} ratio, as k_{ν} is essentially constant over the spectral intervals considered.



(a) $T = 1000^\circ \text{ K}$



(b) $T = 4500^\circ \text{ K}$

Figure 6—Absorption coefficient averaged over 5-cm^{-1} intervals for the fundamental band. $\xi_1 = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

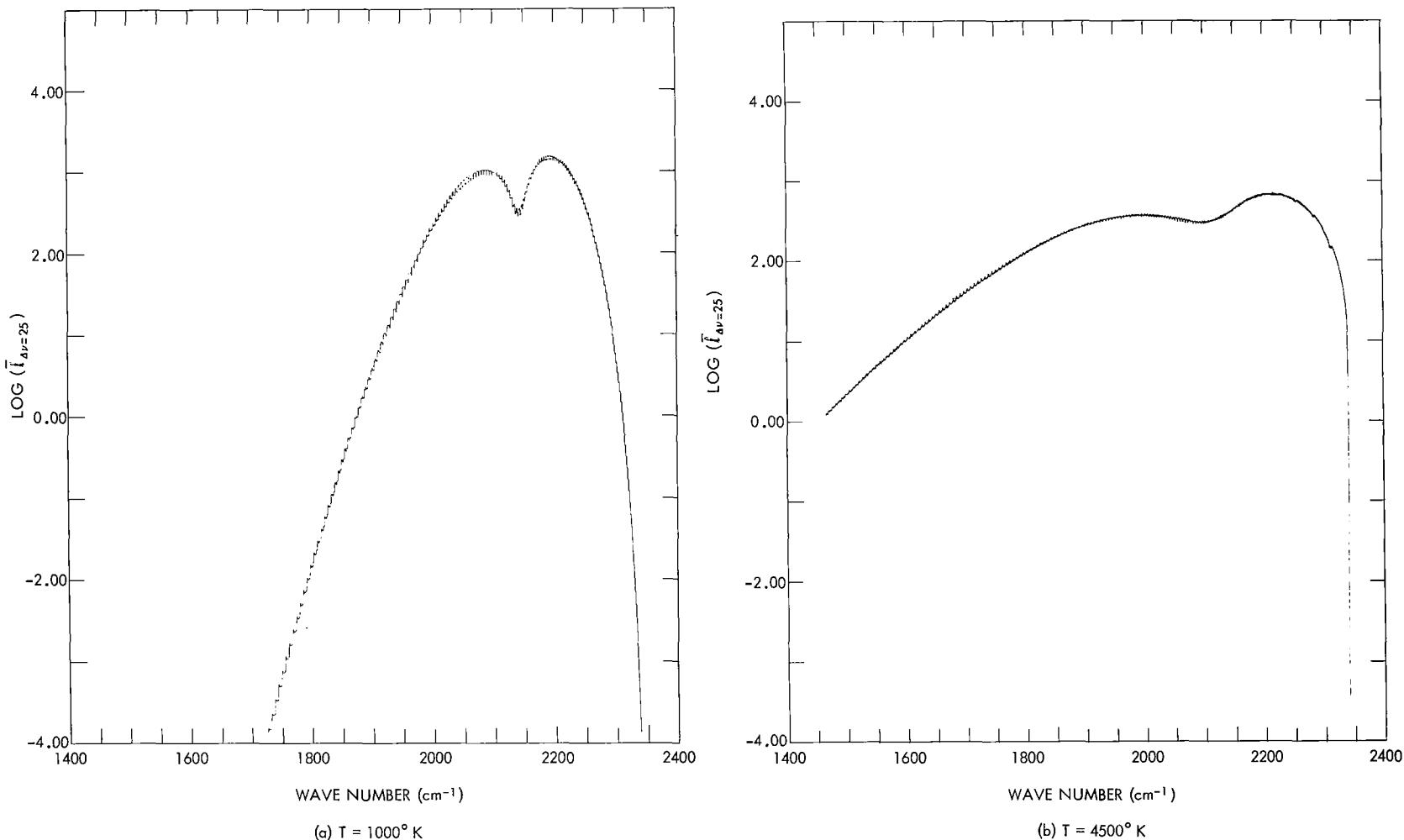


Figure 7—Absorption coefficient averaged over 25-cm⁻¹ intervals for the fundamental band. $\xi_t = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

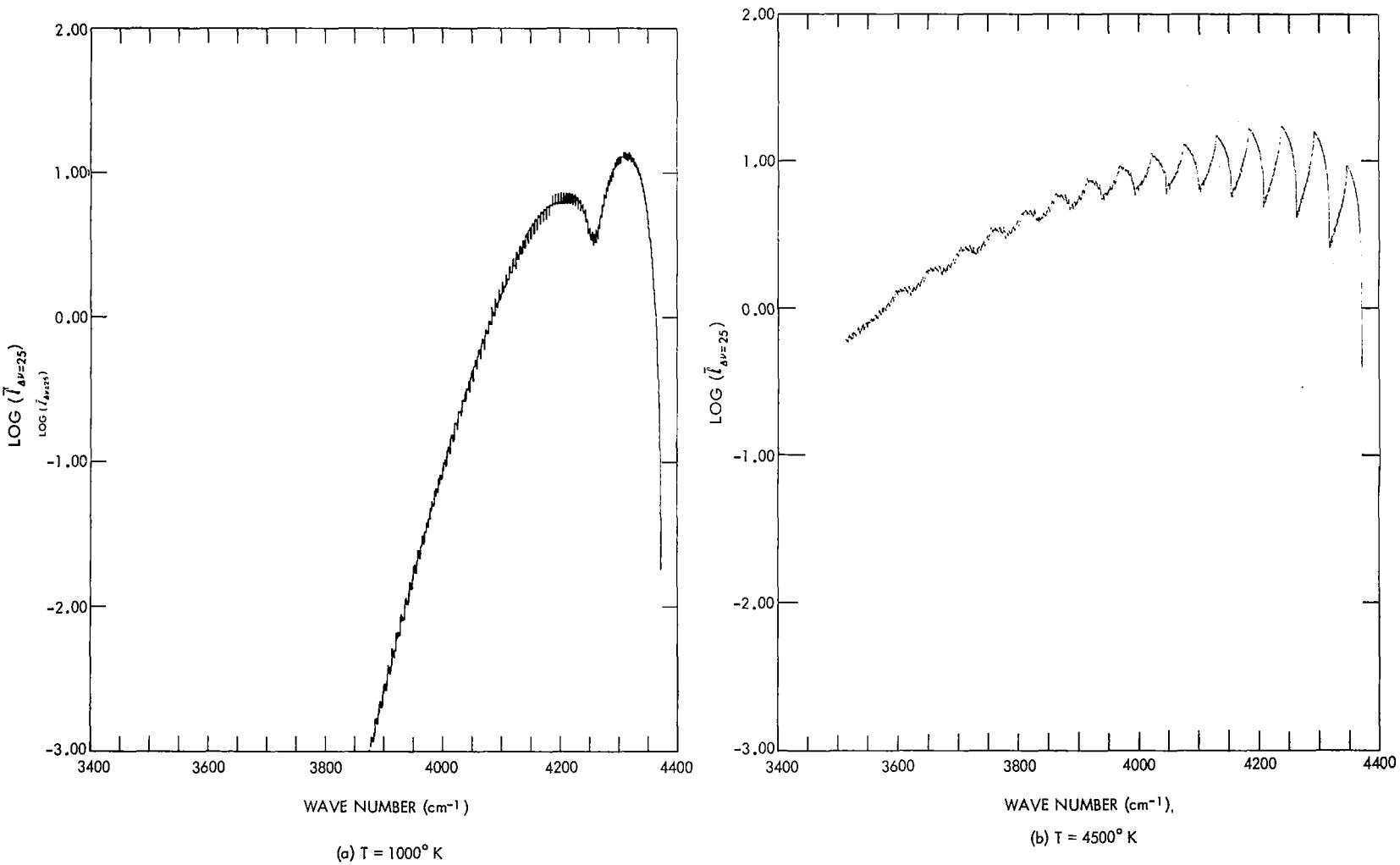


Figure 8—Absorption coefficient averaged over 25-cm^{-1} intervals for the first-overtone band. $\xi_1 = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

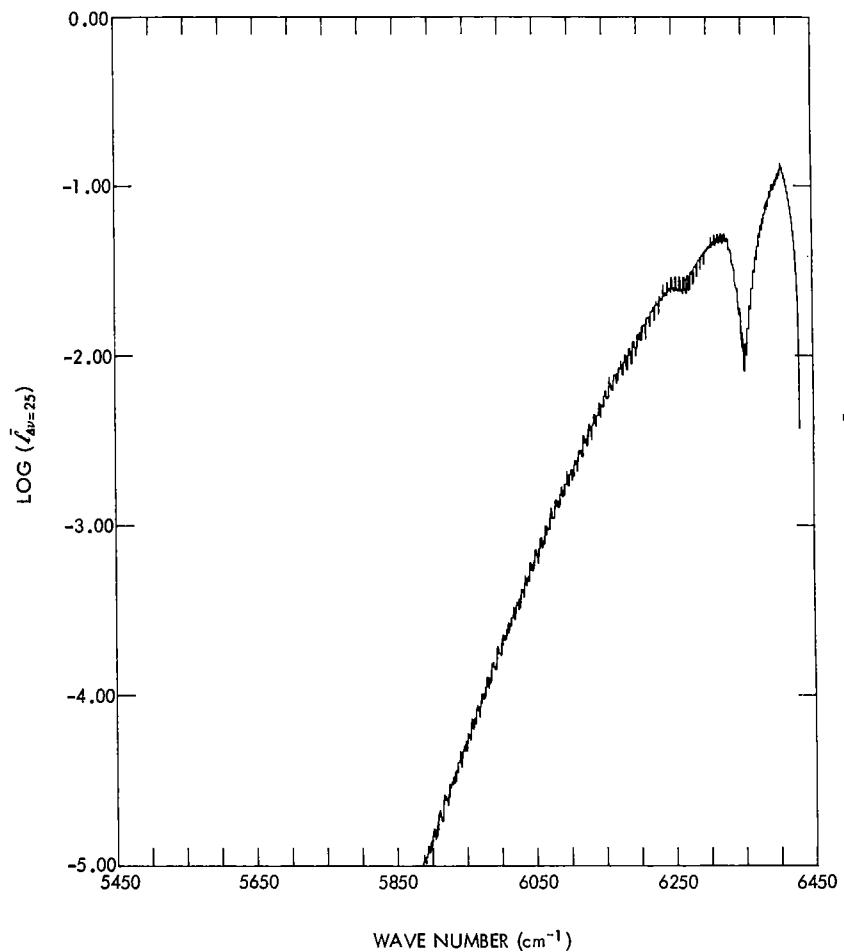
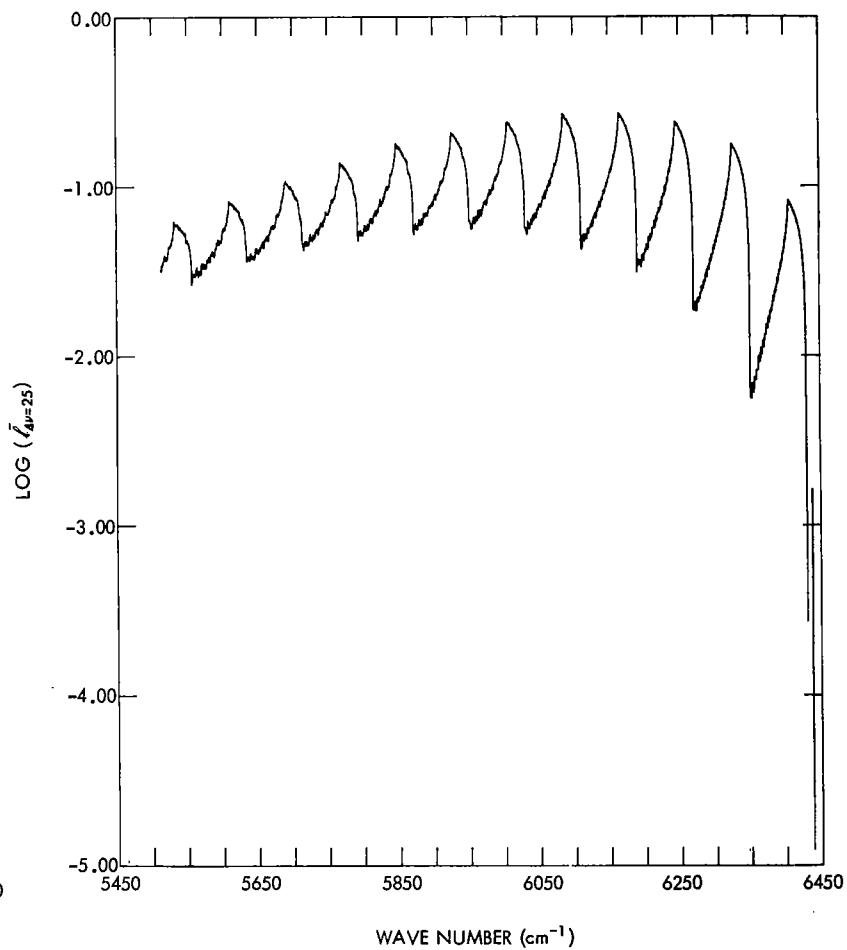
(a) $T = 1000^\circ \text{ K}$ (b) $T = 4500^\circ \text{ K}$

Figure 9—Absorption coefficient averaged over 25-cm^{-1} intervals for the second-overtone band. $\xi_t = 0.0 \text{ km sec}^{-1}$, $P = 10 \text{ dynes cm}^{-2}$.

The statistical weight for the i^{th} sub-interval is defined by

$$w_{\nu_c}^{(L_i)} = \frac{\sum_j N_j \Delta_j}{\Delta\nu} \quad L_i - \frac{\Delta L}{2} < L < L_i + \frac{\Delta L}{2}, \quad (13)$$

where $L = \log_{10}(\ell)$, N_j is the number of occurrences of L in $L_i \pm \Delta L/2$ across the spectral interval

$$\Delta\nu = \sum_j \Delta_j,$$

Δ_j is the step size for determining N_j , and ν_c is the center wave number of the interval. A cumulative probability distribution function can be defined as

$$P_{\nu_c}^c(L_i) = \sum_{k=1}^{k=i} w_{\nu_c}^k \quad L < L_i, \quad (14)$$

where $P_{(L_i)}$ is the probability that the logarithmic absorption coefficient has a value less than L_i .

The opacity probability distribution functions have been determined at temperatures of 1680° , 2016° , 2520° , and 3360°K . For each temperature the distribution functions have been determined for three values of turbulent velocity, 0, 2, and 8 km sec^{-1} . Spectral intervals of $\Delta\nu = 100 \text{ cm}^{-1}$ were chosen.

Numerical Techniques

If only Doppler and turbulent broadening are considered, a significant fraction of the CO spectrum has essentially zero absorption and the spectrum is relatively "open," as is evident in Figures 3 and 4. To decrease the range of the absorption coefficient (and consequently the sub-interval sizes) a minimum absorption coefficient was set for all spectral intervals. In a real atmosphere, other sources of opacity, mainly H_2O , would define this minimum or base absorption coefficient. However, as the continuous opacity k_c is relatively better known than the H_2O opacity, it was decided to define the minimum CO absorption coefficient per gram of CO (ℓ_{min}) in terms of the former.

More explicitly, ℓ_{min} was chosen to have a value of 1/100 of the continuous opacity per gram of stellar material

$$\ell_{min} = \frac{10^{-2} k_c}{(P_{co}/Pg)(M_{co}/\mu)}, \quad (15)$$

Table 1
Characteristic Parameters for the Fundamental Band.

ν_c (cm ⁻¹)	Number of Lines	Number of Mesh Points	Computation Time (sec)	
			Monochromatic Absorption Coefficient	Distribution Function
950	0	2000	2	47
1050	40	2226	4	49
1150	106	2554	8	56
1250	179	2966	13	73
1350	227	3186	17	73
1450	234	3284	18	79
1550	250	3346	19	68
1650	274	3454	17	61
1750	304	3598	19	64
1850	420	4158	29	71
1950	656	5288	52	99
2050	596	5004	46	91
2150	489	4536	37	85
2250	404	4078	29	74
2350	67	2362	8	46
Total	4246	47882	318	1036

val 1300 to 1400 cm⁻¹ and in Figure 4 for 2200 to 2300 cm⁻¹, where the minimum and maximum ordinate values represent respectively the logarithm of the minimum and maximum absorption coefficient for the spectral intervals. The logarithmic sub-intervals for these two spectral intervals are 0.15 and 0.26, respectively.

The optimum step size Δ_j , for the determination of $W_{\nu_c}^i$, was chosen as 0.01 cm⁻¹. As may be seen in Figure 1, this step size traces the line profile reasonably well. As a check on the numerical accuracy of the opacity probability distribution function, a step size of $\Delta_j = 0.001$ cm⁻¹ was used. The comparison of the opacity probability distribution functions for the two step sizes is given in Tables D1 and D2 of Appendix D for the spectral intervals centered at 2250 and 2350 cm⁻¹, respectively. The comparison is presented in terms of the ratio of the statistical weights for $\Delta_j = 0.01$ cm⁻¹ to the statistical weights for $\Delta_j = 0.001$ cm⁻¹. The ratio ranges from 0.65 to 1.27. Computation times for the two step sizes are also included in the tables. As is evident from Figure 1, for $\Delta_j = 0.01$ cm⁻¹ the errors in determining the statistical weights occur primarily in the regions where the line wings are rapidly decreasing. Thus the errors would be largest for small

where P_{co} is the partial pressure of CO, Pg is the gas pressure, μ is the mean molecular weight, and the value of k_c was chosen at the continuous-opacity minimum at 1.65 microns. With a temperature range 1680 to 3360°K under consideration—also a gas pressure range 10-10⁶ dynes cm⁻², the molecular dissociation data of Tsuji (1964), and the absorption coefficient data of Tsuji (1966a)— ℓ_{min} was found to be 2×10^{-8} . After the monochromatic-line absorption coefficient was calculated, all values less than ℓ_{min} were set equal to ℓ_{min} .

A second way used to fill the gaps was to include the effects of pressure-broadened wings. A lower limit of 10 dynes cm⁻² was adopted for the pressure. This aided in filling in between lines, especially near the band center, as is shown in Figure 4.

For each spectral interval the maximum line absorption coefficient was derived for the four different temperatures and three turbulent velocities. Based on the maximum absorption coefficient and the value of $\ell_{min} = 2 \times 10^{-8}$, the absorption coefficient for each spectral interval was divided into 50 equal logarithmic sub-intervals ΔL . Examples of the sub-interval division can be seen in Figure 3 for the inter-

Table 2

Characteristic Parameters for the
First-Overtone Band.

ν_c (cm ⁻¹)	Number of Lines	Number of Mesh Points	Computation Time (sec)	
			Monochromatic Absorption Coefficient	Distribution Function
2450	15	2078	2	37
2550	30	2164	3	38
2650	53	2270	4	40
2750	71	2386	5	42
2850	95	2502	6	44
2950	115	2620	7	46
3050	137	2720	9	47
3150	149	2802	10	49
3250	181	2972	11	51
3350	215	3130	14	54
3450	270	3396	17	58
3550	363	3874	25	65
3650	444	4314	32	77
3750	423	4160	30	74
3850	399	4076	28	72
3950	370	3938	27	69
4050	345	3776	26	66
4150	292	3542	21	61
4250	199	3044	15	55
4350	102	2542	10	48
Total	4268	62306	302	1093

Table 3

Characteristic Parameters for the
Second-Overtone Band.

ν_c (cm ⁻¹)	Number of Lines	Number of Mesh Points	Computation Time (sec)	
			Monochromatic Absorption Coefficient	Distribution Function
4550	79	2418	5	43
4650	101	2544	6	45
4750	125	2662	8	47
4850	148	2782	9	49
4950	166	2886	10	50
5050	193	3018	12	52
5150	227	3212	14	56
5250	284	3502	19	60
5350	337	3770	23	67
5450	303	3620	21	64
5550	298	3564	21	64
5650	305	3628	21	65
5750	278	3462	20	62
5850	253	3322	18	59
5950	239	3242	17	60
6050	227	3190	16	57
6150	171	2916	13	57
6250	143	2768	13	52
6350	108	2588	10	49
6450	36	2192	6	41
Total	4021	61286	282	1099

values of the half-width, and the cases given by the tables illustrate the maximum-type error to be expected. For the overtone regions and for larger values of turbulent broadening, the errors should be much smaller. The errors would also be smaller for larger sub-interval sizes. In this investigation $\Delta_j = 0.01 \text{ cm}^{-1}$ was chosen as the optimum step size with regard to accuracy and computation time.

The first step in deriving the opacity probability distribution function for a 100-cm⁻¹ interval is to establish the monochromatic absorption coefficient mesh in the manner previously described. The number of spectral lines and the number of mesh points in each interval are given in Table 1

for the fundamental band region. For the opacity probability distribution function, intermediate values of L_ν are interpolated from the base mesh at Δ_j steps of 0.01 cm^{-1} . After each interpolation, L_ν is sorted into the appropriate absorption coefficient sub-intervals with a running total kept of the number of points in each sub-interval. When the Δ_j steps have been completed, the distribution functions are computed in accordance with Equations 13 and 14. The same procedure is then applied to the next 100-cm^{-1} interval. Also given in Table 1 are the times for computing ℓ_ν and the opacity probability distribution function, for each 100-cm^{-1} interval. Tables 2 and 3 illustrate the same quantities for the first and second overtones, respectively.

RESULTS

The statistical weights $w_{\nu_c}^{(L_i)}$ are given in numerical form in Appendixes A, B, and C, for the fundamental (1000 to 2400 cm^{-1}), first-overtone (2400 to 4400 cm^{-1}), and second-overtone (4500 to 6500 cm^{-1}) band regions, respectively. Presented in this form, the statistical weights can be readily adapted for various applications. In the late-type model-atmosphere applications, for example, it will not be feasible to consider 50 sub-intervals; however, the statistical weights can easily be re-evaluated for a smaller number of sub-intervals.

For discussion purposes, cumulative probability distribution functions are presented for $T = 1680^\circ \text{K}$ and 3360°K and for $\xi_t = 0.0$ and 8.0 km sec^{-1} in Figures 10 through 14 for the fundamental band. The corresponding figures for the first-overtone and second-overtone bands are in Appendix B and Appendix C, respectively. The wide range of absorption coefficient in each 100-cm^{-1} interval is evident in the figures. As mentioned previously, this is due to the relatively "open" spectrum of CO. The maximum opacities are reached in the P- and R-branch maxima of the various vibrational bands in the spectral intervals 2050 , 2150 , and 2250 cm^{-1} , respectively. In these intervals the opacity varies by about 12-13 orders of magnitude. The opacities decrease going into the band wings. The maximum opacities of the first- and second-overtone are lower than those of the fundamental by factors of 219 and 4160 at 1680°K and by factors of 139 and 10538 at 3360°K . The factors vary with temperature through the Doppler half-width and the induced emission. Anharmonic-oscillator effect causes the band sequence to spread over an increasing wave-number range in going from the fundamental to the first-overtone band sequence.

The closing of the spectral gaps with increasing temperature is reflected in the distribution functions. The maximum absorption of a line occurs at the line center, where

$$\ell_\nu \approx \frac{S(T)}{\alpha_D} . \quad (16)$$

Thus, at a given temperature, the peak line absorption should increase as the turbulent velocity is decreased. For temperature changes with a constant turbulent velocity, the exponential $S(T)$ variation usually dominates the temperature dependence of α_D . Thus in the band wings the peak line absorption should increase while at the band center it should decrease, with increasing temperature. These trends may be seen in the distribution functions.

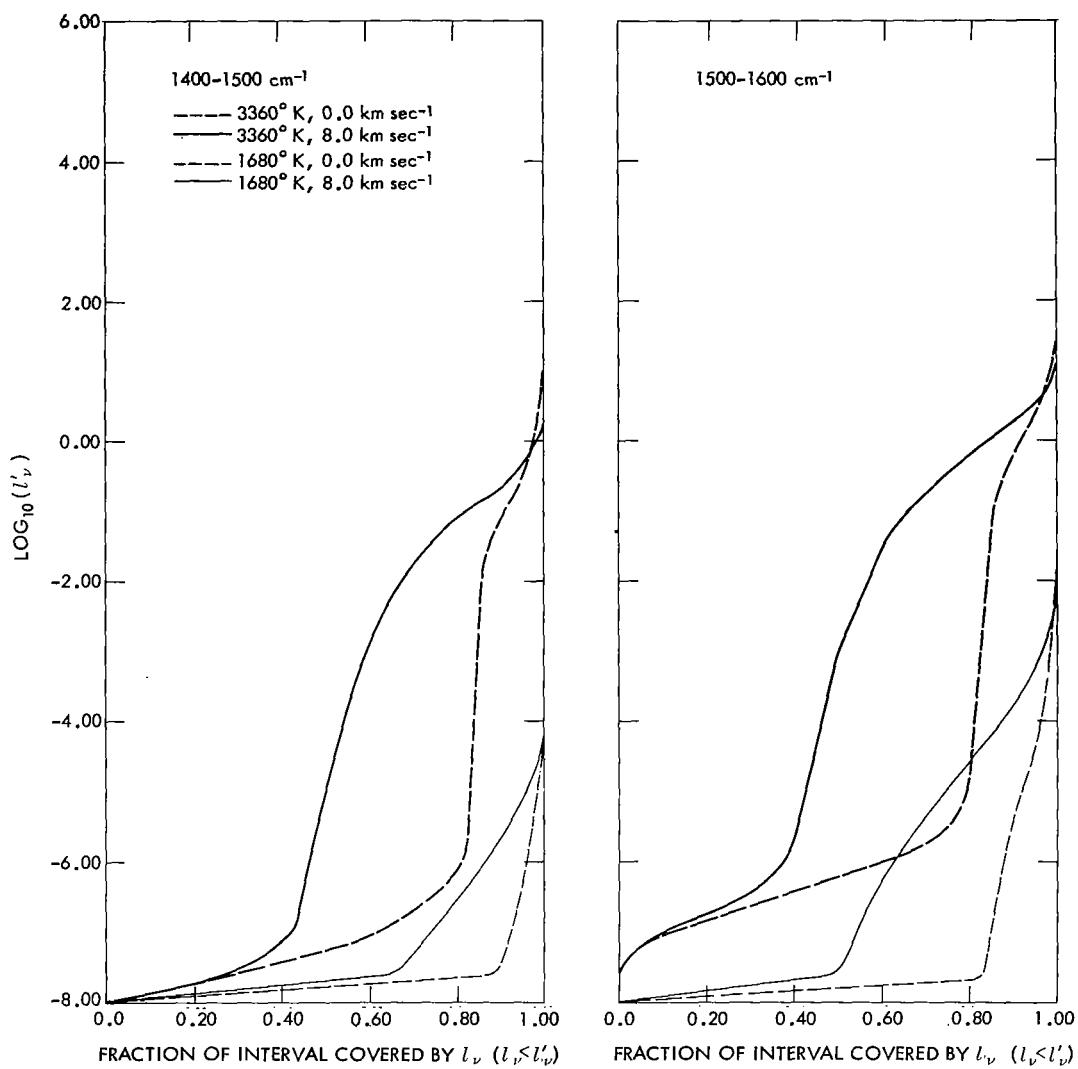


Figure 10—Cumulative opacity distribution functions for the fundamental band of CO, 1400 to 1600 cm⁻¹.

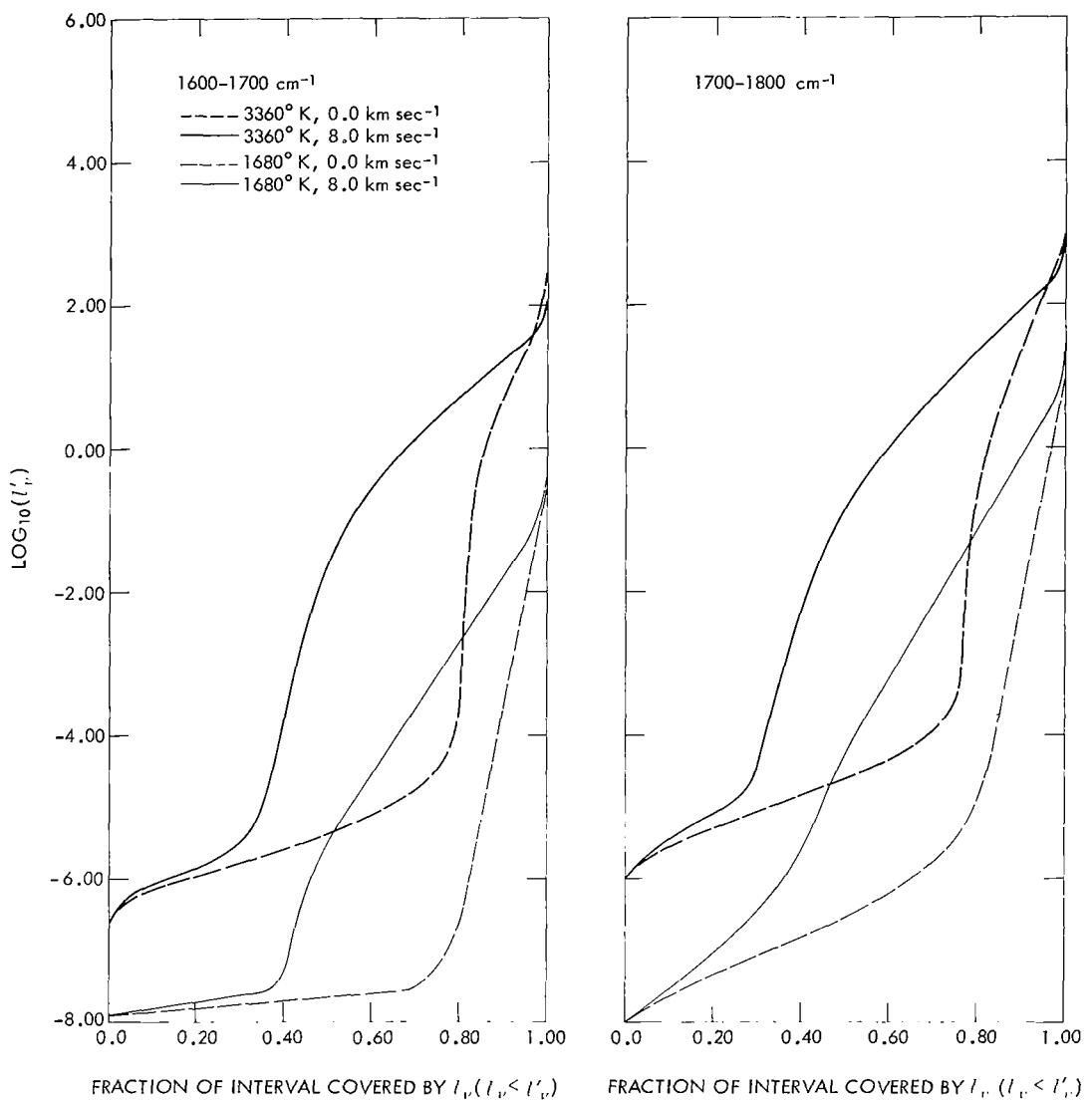


Figure 11—Cumulative opacity distribution functions for the fundamental band of CO, 1600 to 1800 cm^{-1} .

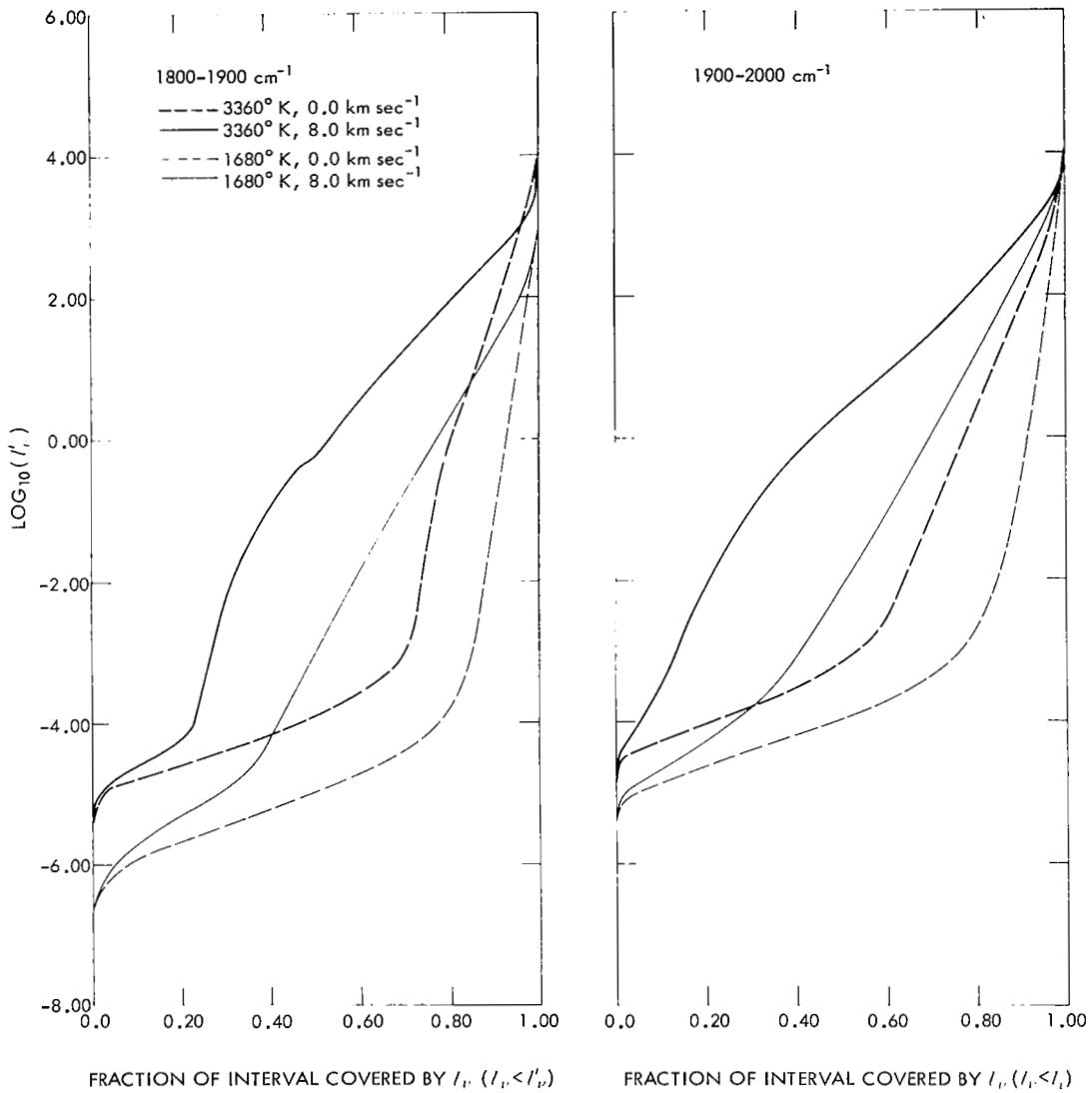


Figure 12—Cumulative opacity distribution functions for the fundamental band of CO, 1800 to 2000 cm^{-1} .

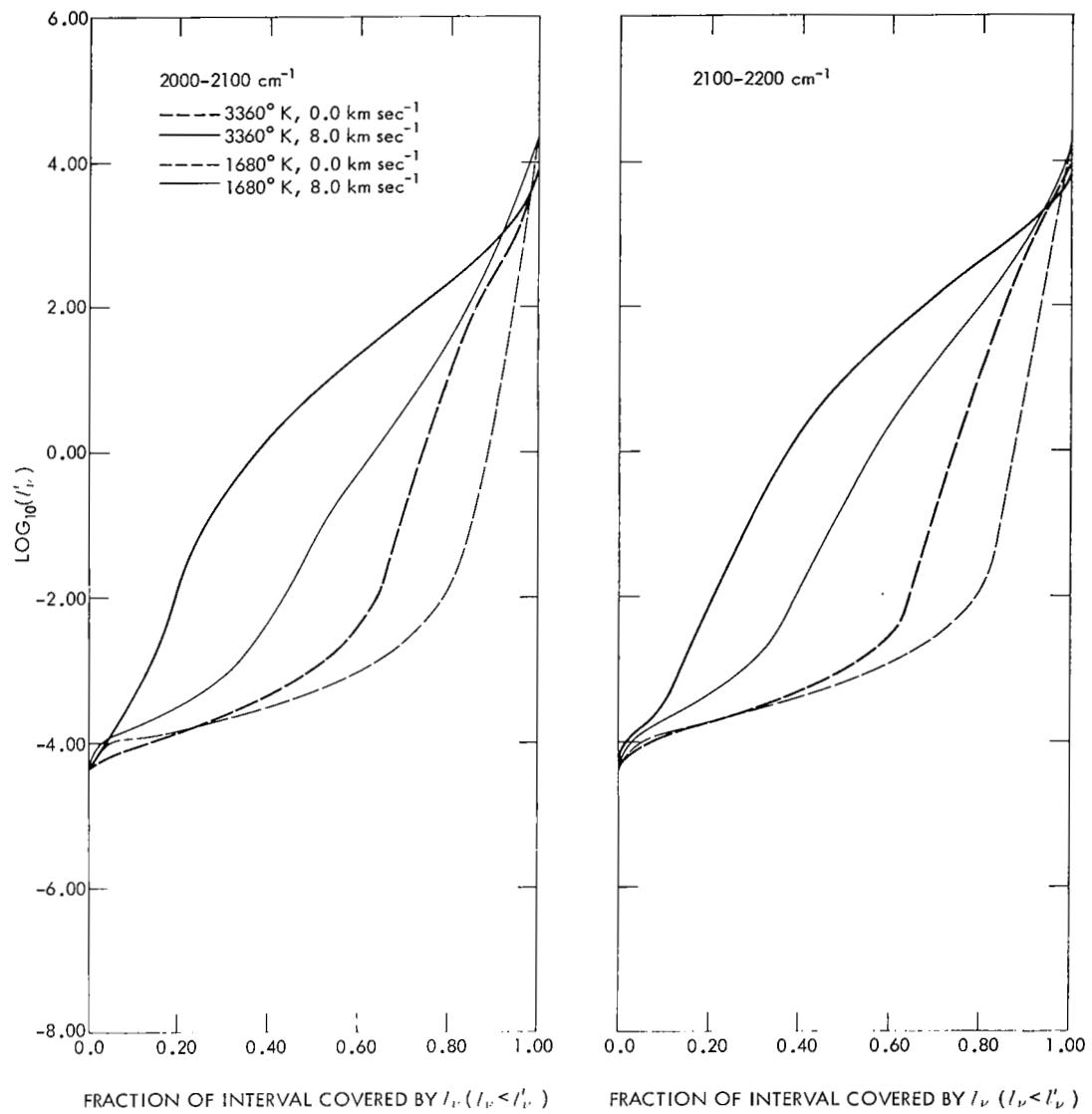


Figure 13—Cumulative opacity distribution functions for the fundamental band of CO, 2000 to 2200 cm^{-1} .

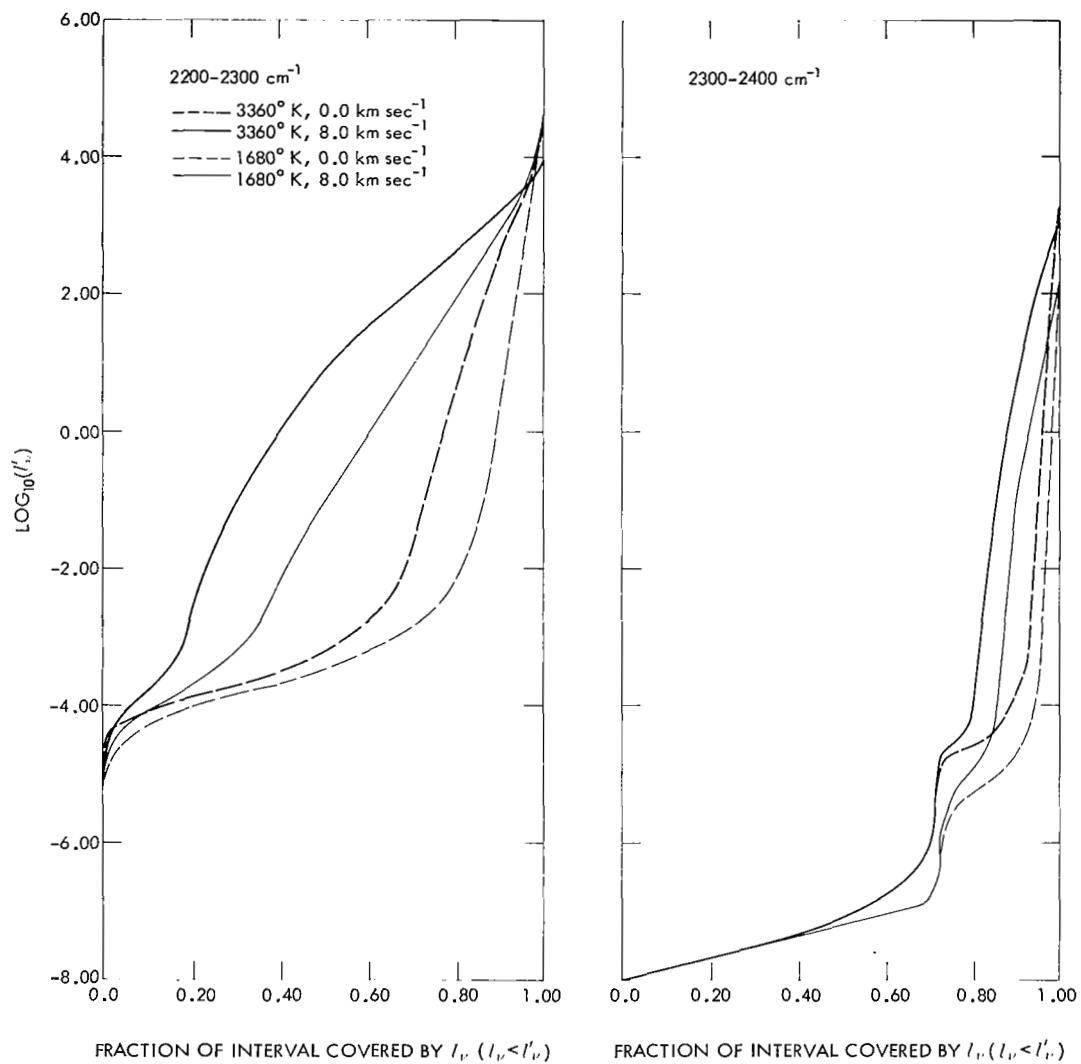


Figure 14—Cumulative opacity distribution functions for the fundamental band of CO, 2200 to 2400 cm^{-1} .

CONCLUDING REMARKS

The opacity distribution functions for CO presented in this investigation provide the basis for including the CO opacity in radiative-convective equilibrium-model atmospheres. The inclusion of both the H₂O and CO opacities will yield more accurate model atmospheres and consequently more accurate emergent spectra. Comparison of the theoretical emergent spectra with observational data such as the balloon spectra of Stratoscope II should yield information on the physical state of the atmospheres, including molecular and atomic abundances, of the observed stars.

In future investigations a similar analysis will be made for OH for oxygen-rich stars and for CN, C₂H, and C₂H₂ for carbon-rich stars. It would seem appropriate and of considerable value to carry out a numerical investigation of the accuracy of the statistical procedure. The capacity and speed of the present generation of computers is sufficient to allow model-atmosphere calculations to be made, considering a limited number of absorption lines exactly. These model atmospheres would thus serve as a standard for comparing approximate methods of estimating molecular absorption.

Goddard Space Flight Center
National Aeronautics and Space Administration
Greenbelt, Maryland, March 25, 1969
160-44-03-02-51

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Appendix A

**Opacity Probability Distribution Functions
for the Fundamental Band**



CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1050.00

MID-POINT AESOPR COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.518EE-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
2 3.690CE-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0
3 3.013SE-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.01	0.0
4 2.461CE-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.04	0.0
5 2.009EE-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.03	0.0
6 1.6413E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.05	0.0
7 1.3404E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.05	0.02
8 1.0547E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.03	0.0
9 8.9397E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.05	0.02
10 7.3007E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.09	0.08
11 5.9622E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.10	0.12
12 4.8691E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.13	0.21
13 3.9764E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.16	0.26
14 3.2473E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.19
15 2.6652E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.25
16 2.1658E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.28
17 1.7667E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.28
18 1.4444E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.31
19 1.1796E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.12	0.29
20 9.6333E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.16	0.27
21 7.8671E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.09	0.31
22 6.4248E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.09	0.22
23 5.2469E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.11	0.24
24 4.2649E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.07	0.21
25 3.4593E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.06	0.16
26 2.8577E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.04	0.22
27 2.3338E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.03	0.22
28 1.9059E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.04	0.19
29 1.5556E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.04	0.11
30 1.2711E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.03	0.19
31 1.0381E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.04	0.14
32 8.4776E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.03	0.14
33 6.9233E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.04	0.14
34 5.6540E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.04	0.16
35 4.6174E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.08	0.05	0.11
36 3.7770E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.05	0.07	0.09
37 3.0795E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.03	0.04	0.11
38 2.6514E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.04	0.0	0.03	0.05	0.13
39 2.0538E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.03	0.02	0.09
40 1.6773E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.03	0.02	0.12
41 1.3698E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.01	0.03	0.11
42 1.0116E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.02	0.01	0.11
43 9.1354E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.03	0.10
44 7.460EE-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.02	0.14
45 6.0927E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.08	0.0	0.0	0.08
46 4.9757E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.11	0.0	0.02	0.11
47 4.0635E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.18	0.0	0.01	0.12
48 3.3185E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.06	0.0	0.01	0.11
49 2.7101E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.10	0.0	0.01	0.11
50 2.2132E-08	100.00	100.00	100.00	100.00	100.00	100.00	99.90	99.50	99.42	97.66	97.10	93.13

CARBON MONOXIDE--FUNDAMENTAL BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1150.00

WID-FCINT AESOPR COEFF PER KM OF CO.	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	6.1611E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0
2	4.7728E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0
3	3.6974E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.06	0.0
4	2.8643E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.09	0.0
5	2.2189E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.11	0.0
6	1.7189E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.14	0.03
7	1.3316E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.20	0.09
8	1.0315E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.27	0.12
9	7.9911E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.46	0.38
10	6.1905E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.40	0.49
11	4.7556E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.56	0.79
12	3.7150E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.61	0.76
13	2.8779E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.51	0.93
14	2.2295E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.57	0.89
15	1.7727E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.54	0.97
16	1.3379E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.62	0.87
17	1.0365E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47	0.53	1.09
18	8.0293E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.40	1.05
19	6.2201E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.42	0.88
20	4.8165E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.33	0.72
21	3.7328E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.19	0.59
22	2.8617E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.24	0.65
23	2.2401E-05	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.55	0.20	0.61
24	1.7354E-05	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.41	0.18	0.48
25	1.3443E-05	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.39	0.09	0.61
26	1.0414E-05	0.0	0.0	0.0	0.0	0.0	0.06	0.03	0.0	0.43	0.15	0.51
27	8.0676E-06	0.0	0.0	0.0	0.0	0.0	0.09	0.04	0.0	0.22	0.08	0.46
28	6.2498E-06	0.0	0.0	0.0	0.0	0.0	0.09	0.06	0.0	0.18	0.08	0.55
29	4.8415E-06	0.0	0.0	0.0	0.0	0.0	0.10	0.10	0.0	0.12	0.11	0.50
30	3.7500E-06	0.0	0.0	0.0	0.0	0.0	0.06	0.13	0.06	0.11	0.08	0.38
31	2.9055E-06	0.0	0.0	0.0	0.0	0.0	0.07	0.17	0.10	0.09	0.07	0.46
32	2.2608E-06	0.0	0.0	0.0	0.0	0.0	0.08	0.21	0.13	0.04	0.09	0.31
33	1.7433E-06	0.0	0.0	0.0	0.0	0.0	0.09	0.26	0.28	0.06	0.07	0.35
34	1.3508E-06	0.0	0.0	0.0	0.0	0.0	0.07	0.35	0.41	0.0	0.05	0.43
35	1.0464E-06	0.0	0.0	0.0	0.0	0.0	0.06	0.34	0.46	0.0	0.02	0.29
36	8.1061E-07	0.0	0.0	0.0	0.0	0.0	0.06	0.46	0.66	0.0	0.05	0.26
37	6.2756E-07	0.0	0.0	0.0	0.0	0.0	0.07	0.49	0.69	0.0	0.03	0.22
38	4.8646E-07	0.0	0.0	0.0	0.0	0.0	0.04	0.50	0.78	0.0	0.02	0.27
39	3.7685E-07	0.0	0.0	0.0	0.0	0.0	0.02	0.44	0.65	0.0	0.0	0.21
40	2.9194E-07	0.0	0.0	0.0	0.0	0.0	0.07	0.56	0.83	0.0	0.02	0.31
41	2.2616E-07	0.0	0.0	0.0	0.0	0.0	0.09	0.46	0.79	0.0	0.04	0.20
42	1.7520E-07	0.0	0.0	0.0	0.0	0.0	0.20	0.46	0.90	0.0	0.05	0.26
43	1.3572E-07	0.0	0.0	0.0	0.0	0.0	0.20	0.46	0.92	0.0	0.11	0.31
44	1.0514E-07	0.0	0.0	0.0	0.0	0.0	0.32	0.40	0.91	0.0	0.03	0.23
45	8.1449E-08	0.0	0.0	0.0	0.0	0.0	0.38	0.50	0.89	0.0	0.13	0.28
46	6.3057E-08	0.0	0.0	0.0	0.0	0.0	0.40	0.42	0.83	0.0	0.08	0.28
47	4.8679E-08	0.0	0.0	0.0	0.0	0.0	0.44	0.31	0.80	0.0	0.09	0.29
48	3.7865E-08	0.0	0.0	0.0	0.0	0.0	0.50	0.35	0.77	0.0	0.12	0.32
49	2.9333E-08	0.0	0.0	0.0	0.0	0.0	0.57	0.27	0.91	0.01	0.07	0.35
50	2.2724E-08	100.00	100.00	100.00	100.00	100.00	95.76	92.23	87.23	92.69	90.64	78.97

CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1250.00

WID-PCINT ABSORP COEFF	TEMP = 1660			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	8.5706E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0
2	6.2555E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.0	0.0
3	4.6244E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.10	0.0
4	3.3566E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.22	0.0
5	2.6495E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.20	0.02
6	1.8328E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.46	0.11
7	1.3463E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.69	0.43
8	9.8891E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.81	0.78
9	7.2640E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	1.03	1.16
10	5.3356E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.98	1.42
11	3.9194E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	1.08	1.61
12	2.8790E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	1.05	1.94
13	2.1147E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70	1.05	1.92
14	1.5534E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.76	1.00	2.06
15	1.1410E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91	0.86	2.08
16	8.3615E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.86	0.74	1.81
17	6.1566E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.95	0.58	1.58
18	4.6522E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.01	0.0	0.96	0.53	1.40
19	3.3219E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.08	0.0	0.76	0.29	1.24
20	2.4401E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.10	0.0	0.77	0.39	1.28
21	1.7524E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.13	0.03	0.52	0.28	1.03
22	1.3166E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.27	0.09	0.36	0.28	0.98
23	9.6709E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.42	0.17	0.26	0.17	0.79
24	7.1037E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.43	0.56	0.12	0.18	0.85
25	5.2180E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.66	0.65	0.15	0.21	0.87
26	3.8329E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.70	0.93	0.04	0.17	0.69
27	2.8155E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.71	1.02	0.03	0.10	0.73
28	2.0681E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.94	1.17	0.0	0.09	0.58
29	1.5191E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.74	1.31	0.0	0.12	0.69
30	1.11559E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.32	1.01	1.52	0.0	0.07	0.57
31	8.1956E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.79	1.66	0.0	0.18	0.65
32	6.0228E-06	0.0	0.0	0.0	0.02	0.0	0.0	0.47	0.88	1.77	0.0	0.13	0.62
33	4.4226E-06	0.0	0.0	0.0	0.05	0.0	0.0	0.56	0.94	1.64	0.01	0.17	0.45
34	3.2466E-06	0.0	0.0	0.0	0.06	0.0	0.0	0.49	0.72	1.65	0.0	0.20	0.49
35	2.3862E-06	0.0	0.0	0.0	0.04	0.0	0.0	0.73	0.68	1.74	0.01	0.13	0.44
36	1.7528E-06	0.0	0.0	0.0	0.08	0.06	0.0	0.62	0.62	1.63	0.06	0.21	0.37
37	1.2675E-06	0.0	0.0	0.0	0.10	0.08	0.0	0.84	0.47	1.23	0.10	0.24	0.46
38	9.4575E-07	0.0	0.0	0.0	0.13	0.16	0.07	0.66	0.34	1.38	0.15	0.17	0.38
39	6.9470E-07	0.0	0.0	0.0	0.12	0.17	0.10	0.59	0.29	1.23	0.14	0.22	0.41
40	5.1029E-07	0.0	0.0	0.0	0.12	0.27	0.18	0.69	0.36	1.05	0.14	0.21	0.39
41	3.7483E-07	0.0	0.0	0.0	0.13	0.39	0.42	0.64	0.21	0.83	0.21	0.09	0.41
42	2.7533E-07	0.0	0.0	0.0	0.13	0.44	0.54	0.62	0.23	0.76	0.18	0.23	0.43
43	2.0225E-07	0.0	0.0	0.0	0.0	0.57	0.69	0.47	0.15	1.00	0.15	0.10	0.44
44	1.4256E-07	0.0	0.0	0.0	0.0	0.59	0.81	0.35	0.14	0.84	0.19	0.17	0.47
45	1.0513E-07	0.0	0.0	0.0	0.0	0.48	0.87	0.24	0.20	0.76	0.21	0.10	0.45
46	8.0156E-08	0.0	0.0	0.0	0.0	0.69	0.97	0.18	0.13	0.75	0.14	0.07	0.50
47	5.8880E-08	0.0	0.0	0.0	0.08	0.69	1.15	0.12	0.13	0.73	0.11	0.08	0.47
48	4.3250E-08	0.0	0.0	0.0	0.15	0.79	1.37	0.03	0.19	0.70	0.16	0.10	0.52
49	3.1769E-08	0.0	0.0	0.0	0.23	0.65	1.66	0.0	0.12	0.75	0.24	0.15	0.43
50	2.3336E-08	100.00	100.00	100.00	98.54	93.93	91.17	88.88	86.21	70.45	86.68	83.32	62.60

CARBON MONOXIDE--FUNDAMENTAL BAND
 CAPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1350.00

MID-FC INT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 1.2512E-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0
2 6.7064E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.02	0.0
3 6.0581E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.10	0.0
4 4.2154E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.18	0.0
5 2.9331E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.36	0.04
6 2.0410E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.62	0.22
7 1.4201E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.97	0.60
8 9.8817E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	1.36	1.22
9 6.8759E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.52	1.57	1.75
10 4.7844E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.78	1.72	2.44
11 3.3291E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04	1.71	2.87
12 2.3165E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	1.15	1.68	3.32
13 1.6119E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.01	0.0	1.38	1.48	3.36
14 1.1216E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.07	0.0	1.50	1.08	3.03
15 7.8041E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.10	0.0	1.51	0.89	2.91
16 5.4303E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.22	0.04	1.24	0.70	2.50
17 3.7785E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.37	0.10	1.16	0.53	1.98
18 2.6292E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.53	0.36	0.81	0.54	1.93
19 1.8294E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.77	0.68	0.48	0.31	1.56
20 1.2730E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.96	1.02	0.25	0.31	1.47
21 8.8576E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.39	1.07	1.37	0.23	0.23	1.32
22 6.1633E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.44	1.33	1.79	0.09	0.21	1.19
23 4.2886E-04	0.0	0.0	0.0	0.03	0.0	0.0	0.44	1.33	2.20	0.0	0.20	1.11
24 2.9841E-04	0.0	0.0	0.0	0.07	0.0	0.0	0.77	1.37	2.39	0.01	0.21	1.15
25 2.0764E-04	0.0	0.0	0.0	0.07	0.03	0.0	0.73	1.36	2.59	0.0	0.25	1.07
26 1.4446E-04	0.0	0.0	0.0	0.10	0.09	0.0	0.88	1.25	2.82	0.01	0.24	1.13
27 1.0053E-04	0.0	0.0	0.0	0.16	0.06	0.0	1.05	1.19	2.69	0.0	0.26	1.01
28 6.9954E-05	0.0	0.0	0.0	0.12	0.21	0.04	1.03	0.99	2.74	0.04	0.24	0.91
29 4.8675E-05	0.0	0.0	0.0	0.14	0.33	0.15	1.17	0.83	2.53	0.06	0.31	0.68
30 3.3869E-05	0.0	0.0	0.0	0.17	0.42	0.41	1.06	0.69	2.12	0.09	0.37	0.82
31 2.3567E-05	0.0	0.0	0.0	0.19	0.54	0.63	1.10	0.53	1.91	0.13	0.35	0.61
32 1.6359E-05	0.0	0.0	0.0	0.17	0.59	0.77	1.00	0.49	1.76	0.17	0.31	0.78
33 1.1410E-05	0.0	0.0	0.0	0.21	0.83	0.96	0.77	0.31	1.54	0.25	0.28	0.59
34 7.9397E-06	0.01	0.0	0.0	0.29	0.93	1.33	0.79	0.27	1.31	0.23	0.27	0.63
35 5.5244E-06	0.04	0.0	0.0	0.29	1.06	1.62	0.40	0.27	1.38	0.28	0.18	0.63
36 3.8442E-06	0.06	0.0	0.0	0.38	1.08	1.86	0.30	0.25	1.20	0.14	0.11	0.54
37 2.6745E-06	0.07	0.02	0.0	0.44	1.11	1.95	0.24	0.24	1.08	0.24	0.15	0.58
38 1.8612E-06	0.08	0.08	0.0	0.53	1.20	1.96	0.08	0.22	1.26	0.12	0.17	0.49
39 1.2551E-06	0.09	0.05	0.0	0.62	1.10	2.40	0.07	0.19	1.20	0.14	0.25	0.50
40 9.0115E-07	0.10	0.17	0.07	0.65	1.04	2.29	0.0	0.17	0.89	0.08	0.29	0.53
41 6.2704E-07	0.11	0.21	0.18	0.80	1.02	2.46	0.01	0.22	0.92	0.12	0.45	0.46
42 4.3631E-07	0.10	0.36	0.34	0.74	1.08	2.27	0.0	0.20	0.83	0.15	0.30	0.46
43 3.0359E-07	0.15	0.39	0.43	0.90	0.75	2.33	0.0	0.29	0.57	0.27	0.33	0.44
44 2.1125E-07	0.02	0.45	0.63	0.59	0.74	2.26	0.0	0.25	0.67	0.44	0.30	0.51
45 1.4659E-07	0.0	0.61	0.76	0.89	0.58	1.93	0.01	0.32	0.76	0.80	0.55	0.62
46 1.0226E-07	0.0	0.65	1.00	0.94	0.51	1.79	0.01	0.42	0.73	1.20	0.68	0.65
47 7.1169E-08	0.03	0.74	1.25	1.01	0.43	1.67	0.02	0.27	0.77	1.94	1.13	0.67
48 4.9521E-08	0.09	0.90	1.35	0.98	0.39	1.63	0.08	0.31	0.78	2.50	1.79	0.82
49 3.4458E-08	0.25	0.66	1.99	0.96	0.33	2.00	0.08	0.28	0.84	3.59	2.77	0.93
50 2.3977E-08	98.80	94.66	91.80	87.18	83.55	65.29	85.47	80.05	54.16	72.68	70.69	46.97

CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1450.00

MID-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 1.6256E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 1.0741E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0
3 7.0562E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.07	0.0
4 4.6684E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.19	0.0
5 3.0576E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.54	0.03
6 2.0466E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.85	0.23
7 1.3522E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67	1.33	1.02
8 8.9336E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.86	1.48	1.90
9 5.9024E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	1.14	1.77	2.25
10 3.8997E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.01	0.0	1.12	1.87	2.89
11 2.5765E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.09	0.0	1.42	2.00	3.65
12 1.7023E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.14	0.0	1.41	1.79	4.19
13 1.1247E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.42	0.04	1.79	1.42	3.80
14 7.4307E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.60	0.29	1.52	1.22	3.51
15 4.9054E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.83	0.78	1.20	0.89	2.74
16 3.2436E-02	0.0	0.0	0.0	0.01	0.0	0.0	0.50	1.07	1.33	0.90	0.82	2.57
17 2.1430E-02	0.0	0.0	0.0	0.06	0.0	0.0	0.58	1.19	1.75	0.63	0.49	2.04
18 1.4155E-02	0.0	0.0	0.0	0.08	0.01	0.0	0.77	1.29	1.83	0.40	0.47	2.00
19 9.3547E-03	0.0	0.0	0.0	0.10	0.06	0.0	0.88	1.47	2.22	0.18	0.37	1.59
20 6.1E06E-03	0.0	0.0	0.0	0.14	0.14	0.0	0.96	1.62	2.91	0.07	0.49	1.73
21 4.0835E-03	0.0	0.0	0.0	0.12	0.29	0.03	1.06	1.45	3.24	0.0	0.34	1.46
22 2.6579E-03	0.0	0.0	0.0	0.17	0.42	0.23	1.01	1.50	3.39	0.09	0.41	1.36
23 1.7825E-03	0.0	0.0	0.0	0.13	0.57	0.57	1.17	1.17	2.97	0.14	0.39	1.15
24 1.1777E-03	0.01	0.0	0.0	0.22	0.62	0.81	1.33	1.19	3.18	0.21	0.49	1.08
25 7.7809E-04	0.05	0.0	0.0	0.31	0.88	1.16	1.08	1.00	2.67	0.15	0.46	0.98
26 5.1408E-04	0.05	0.01	0.0	0.41	0.94	1.50	1.06	0.73	2.42	0.31	0.36	0.96
27 3.3965E-04	0.08	0.05	0.0	0.53	1.02	1.59	0.85	0.69	2.23	0.33	0.25	0.77
28 2.2440E-04	0.10	0.06	0.0	0.67	1.14	1.76	0.80	0.53	1.79	0.30	0.23	0.93
29 1.4826E-04	0.10	0.17	0.01	0.60	1.17	2.18	0.60	0.44	1.82	0.31	0.23	0.78
30 9.7956E-05	0.05	0.30	0.17	0.83	1.31	2.43	0.32	0.43	1.61	0.32	0.21	0.74
31 6.4719E-05	0.14	0.36	0.35	0.73	1.17	2.82	0.24	0.39	1.50	0.24	0.35	0.70
32 4.2760E-05	0.13	0.56	0.57	0.86	1.30	2.73	0.13	0.33	1.26	0.22	0.29	0.87
33 2.8251E-05	0.15	0.50	0.77	0.87	1.08	2.68	0.04	0.36	1.18	0.16	0.40	0.88
34 1.8866E-05	0.18	0.66	1.05	0.84	1.07	2.84	0.01	0.42	0.99	0.09	0.30	0.91
35 1.2322E-05	0.29	0.83	1.26	1.08	0.94	2.54	0.01	0.37	0.87	0.09	0.37	0.70
36 8.1477E-06	0.36	0.72	1.33	0.85	0.90	2.22	0.09	0.33	1.01	0.04	0.39	0.68
37 5.3831E-06	0.39	0.93	1.46	1.03	0.80	2.37	0.09	0.40	0.88	0.13	0.50	0.71
38 3.5556E-06	0.54	0.94	1.77	0.83	0.71	1.94	0.10	0.20	0.92	0.24	0.37	0.64
39 2.3498E-06	0.62	1.01	1.95	0.72	0.57	1.84	0.16	0.22	0.84	0.47	0.35	0.65
40 1.5525E-06	0.61	1.02	2.01	0.62	0.48	1.72	0.18	0.27	0.87	0.85	0.54	0.65
41 1.0257E-06	0.69	1.10	2.40	0.56	0.40	1.67	0.17	0.24	0.75	1.47	0.73	0.70
42 6.7776E-07	0.65	1.08	2.42	0.51	0.34	1.32	0.24	0.29	0.76	2.33	1.24	0.59
43 4.4775E-07	0.65	0.95	2.39	0.29	0.33	1.16	0.24	0.30	0.71	3.08	1.86	0.69
44 2.9582E-07	0.72	1.03	2.52	0.21	0.35	1.07	0.29	0.33	0.87	3.98	3.04	0.63
45 1.9545E-07	0.75	0.94	2.43	0.15	0.42	1.09	0.35	0.32	0.74	5.17	4.56	0.93
46 1.2913E-07	0.78	1.00	2.24	0.04	0.42	0.90	0.54	0.40	0.82	7.07	6.48	1.91
47 8.5318E-08	0.90	0.87	2.47	0.02	0.26	1.07	0.67	0.47	0.69	7.67	7.19	2.88
48 5.6369E-08	0.97	0.95	2.28	0.02	0.33	1.20	1.04	0.70	0.66	9.68	9.50	5.31
49 3.7242E-08	0.97	0.82	2.39	0.08	0.35	1.18	1.47	1.14	0.96	10.48	10.39	6.62
50 2.4606E-08	85.13	83.10	85.76	85.31	79.21	53.38	79.77	74.66	46.25	29.79	29.72	26.00

CARBON MONOXIDE--FUNDAMENTAL BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1550.00

MID-POINT ABSCRP COEFF PER CM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 9.5207E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
2 6.1C71E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.11	0.0
3 3.8529E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.29	0.0
4 2.4E15E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.66	0.10
5 1.5818E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.64	1.00	0.60
6 1.0683E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.79	1.40	1.31
7 6.4272E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.06	0.0	1.10	1.77	2.22
8 4.0565E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.17	0.0	1.33	2.07	3.02
9 2.6115E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.37	0.02	1.78	2.16	3.74
10 1.6647E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.54	0.32	1.85	1.97	3.82
11 1.0611E 00	0.0	0.0	0.0	0.07	0.0	0.0	0.39	0.74	0.81	1.60	1.91	4.13
12 6.7640E-01	0.0	0.0	0.0	0.08	0.01	0.0	0.61	1.02	1.17	1.51	1.60	3.76
13 4.3116E-01	0.0	0.0	0.0	0.11	0.07	0.0	0.63	1.36	1.73	1.42	1.22	3.81
14 2.7484E-01	0.0	0.0	0.0	0.11	0.17	0.0	0.79	1.49	2.11	1.07	0.97	3.50
15 1.7515E-01	0.0	0.0	0.0	0.14	0.36	0.10	0.98	1.53	2.77	0.91	0.55	3.09
16 1.1167E-01	0.02	0.0	0.0	0.17	0.45	0.46	1.17	1.60	3.12	0.37	0.82	2.54
17 7.1186E-02	0.06	0.0	0.0	0.25	0.57	0.70	1.37	1.56	3.03	0.38	0.50	2.08
18 4.5376E-02	0.07	0.03	0.0	0.29	0.71	0.98	1.32	1.52	3.33	0.35	0.58	1.67
19 2.8525E-02	0.06	0.08	0.0	0.44	0.90	1.17	1.27	1.32	3.20	0.24	0.44	1.48
20 1.8432E-02	0.12	0.15	0.0	0.59	1.14	1.59	1.11	1.33	3.16	0.22	0.50	1.40
21 1.1753E-02	0.10	0.30	0.16	0.56	1.22	1.96	1.19	1.21	3.14	0.20	0.41	1.48
22 7.4916E-03	0.14	0.36	0.41	0.76	1.31	2.27	0.97	0.97	2.95	0.24	0.51	1.38
23 4.7755E-03	0.12	0.47	0.58	0.81	1.21	2.78	1.03	0.78	2.93	0.30	0.41	1.39
24 3.0440E-03	0.19	0.55	0.78	0.88	1.24	2.60	0.72	0.70	2.39	0.22	0.40	1.36
25 1.9404E-03	0.32	0.59	0.98	1.01	1.15	2.71	0.66	0.68	2.13	0.18	0.51	1.21
26 1.2216E-03	0.34	0.85	1.15	1.08	1.21	2.73	0.28	0.57	1.68	0.23	0.40	1.09
27 7.8843E-04	0.46	0.95	1.40	1.06	1.16	2.80	0.30	0.52	1.51	0.16	0.40	0.98
28 5.0257E-04	0.48	0.92	1.72	1.04	1.02	2.61	0.25	0.42	1.41	0.17	0.43	1.00
29 3.2036E-04	0.53	1.15	1.96	0.82	1.18	2.59	0.23	0.30	1.50	0.08	0.41	0.80
30 2.0421E-04	0.57	1.07	2.24	0.96	1.00	2.60	0.19	0.36	1.45	0.08	0.50	0.85
31 1.3017E-04	0.66	0.92	2.45	0.81	1.01	2.53	0.19	0.39	1.29	0.08	0.43	0.77
32 8.2975E-05	0.77	1.07	2.33	0.83	0.86	2.41	0.16	0.41	1.33	0.08	0.44	0.74
33 5.2691E-05	0.79	0.86	2.32	0.81	0.67	2.18	0.09	0.57	1.07	0.13	0.44	0.60
34 3.3716E-05	0.81	1.03	2.42	0.59	0.66	2.09	0.19	0.38	1.12	0.27	0.41	0.55
35 2.1491E-05	0.90	0.87	2.38	0.51	0.55	1.72	0.18	0.39	1.00	0.58	0.42	0.68
36 1.3266E-05	0.82	1.01	2.26	0.36	0.47	1.53	0.24	0.43	0.93	0.43	0.77	
37 8.7324E-06	0.85	1.07	2.30	0.32	0.33	1.39	0.17	0.44	0.76	1.56	0.84	0.78
38 5.5564E-06	0.72	1.05	2.14	0.22	0.35	1.34	0.18	0.37	0.71	2.37	1.33	0.70
39 3.5482E-06	0.77	1.04	2.25	0.24	0.31	1.28	0.34	0.33	0.77	3.43	2.26	0.82
40 2.2618E-06	0.67	0.89	2.38	0.17	0.38	1.30	0.36	0.46	0.71	4.37	3.30	0.95
41 1.4417E-06	0.75	0.83	2.35	0.17	0.42	1.23	0.72	0.52	0.48	5.84	5.08	1.29
42 9.1901E-07	0.73	0.70	2.08	0.19	0.47	1.11	1.20	0.65	0.65	8.80	7.78	2.19
43 5.8581E-07	0.66	0.72	1.95	0.14	0.45	1.00	1.88	1.10	0.85	10.16	9.54	4.30
44 3.7732E-07	0.57	0.54	1.72	0.17	0.42	0.96	2.35	1.70	0.81	9.78	9.52	5.04
45 2.3803E-07	0.45	0.45	1.48	0.30	0.45	0.76	3.32	2.51	0.96	11.06	10.94	7.51
46 1.5173E-07	0.39	0.33	1.32	0.39	0.54	0.78	3.86	3.23	1.12	9.51	9.47	7.44
47 9.6719E-08	0.42	0.31	1.29	0.72	0.50	0.74	5.20	4.60	1.75	6.94	6.90	5.80
48 6.1622E-08	0.44	0.43	1.55	1.30	0.86	0.71	8.11	7.33	3.02	3.91	3.91	3.67
49 3.9299E-08	0.40	0.43	1.93	1.89	1.14	0.81	10.38	9.69	4.98	1.66	1.66	1.59
50 2.5051E-08	63.66	77.98	49.66	78.64	73.08	43.48	44.60	43.38	29.83	0.0	0.0	0.0

CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1650.00

PER CM OF CO	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	8.2032E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0
2	5.0071E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.08	0.0
3	3.0562E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.32	0.0
4	1.8654E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.52	0.68	0.11
5	1.1386E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.05	0.0	0.71	1.23	0.67
6	6.9498E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.12	0.0	1.04	1.58	1.71
7	4.2420E 01	0.0	0.0	0.0	0.03	0.0	0.0	0.23	0.46	0.0	1.37	1.92	2.85
8	2.5692E 01	0.0	0.0	0.0	0.09	0.0	0.0	0.35	0.63	0.45	1.70	2.00	3.54
9	1.5804E 01	0.0	0.0	0.0	0.10	0.07	0.0	0.52	0.84	0.89	1.77	1.92	4.21
10	9.6462E 00	0.01	0.0	0.0	0.12	0.22	0.0	0.70	1.27	1.49	1.68	1.86	3.97
11	5.8878E 00	0.05	0.0	0.0	0.17	0.40	0.08	0.84	1.32	2.17	1.55	1.82	4.01
12	3.5538E 00	0.07	0.02	0.0	0.17	0.51	0.52	1.01	1.49	2.66	1.46	1.53	3.98
13	2.1936E 00	0.07	0.10	0.0	0.44	0.65	0.80	1.23	1.60	3.14	1.14	1.64	3.69
14	1.3238E 00	0.10	0.21	0.0	0.41	0.87	1.22	1.28	1.47	3.18	1.13	1.74	3.86
15	8.1723E -01	0.12	0.29	0.17	0.58	1.01	1.61	1.31	1.30	3.35	1.22	1.18	3.66
16	4.9882E -01	0.12	0.38	0.48	0.68	1.12	2.10	1.29	1.56	3.21	0.76	1.01	3.19
17	3.0446E -01	0.22	0.57	0.76	0.81	1.18	2.38	1.11	1.31	3.35	0.63	0.90	2.51
18	1.8584E -01	0.32	0.69	0.94	0.86	1.16	2.72	1.16	1.40	3.28	0.41	0.72	2.05
19	1.1243E -01	0.45	0.71	1.28	0.98	1.22	2.55	0.94	1.55	3.21	0.36	0.59	1.85
20	6.9235E -02	0.44	0.89	1.62	1.02	1.31	2.70	0.92	1.30	3.22	0.24	0.60	1.78
21	4.2260E -02	0.55	0.95	1.78	1.05	1.06	2.97	1.02	1.33	2.81	0.23	0.56	1.47
22	2.5754E -02	0.56	0.87	1.92	0.93	1.22	2.92	0.87	1.12	3.06	0.22	0.55	1.52
23	1.5744E -02	0.72	1.05	2.43	0.98	1.15	2.71	0.80	0.88	2.68	0.22	0.56	1.55
24	9.6098E -03	0.81	1.13	2.22	0.83	1.30	2.78	0.71	0.90	2.11	0.21	0.64	1.45
25	5.8656E -03	0.74	1.05	2.30	0.89	1.29	2.76	0.52	0.63	1.99	0.25	0.55	1.07
26	3.5802E -03	0.82	0.98	2.66	0.87	1.12	2.66	0.38	0.58	1.78	0.18	0.49	1.07
27	2.1853E -03	0.82	0.94	2.52	0.83	1.30	2.62	0.21	0.64	1.60	0.07	0.41	0.93
28	1.3338E -03	0.88	0.93	2.65	0.72	0.97	2.37	0.24	0.57	1.46	0.11	0.34	0.80
29	8.1414E -04	0.73	1.15	2.39	0.76	1.12	2.58	0.17	0.46	1.54	0.08	0.36	0.87
30	4.9693E -04	0.82	1.14	2.25	0.68	1.06	2.46	0.15	0.51	1.39	0.18	0.42	0.75
31	3.0332E -04	0.69	1.04	2.35	0.65	0.82	2.17	0.15	0.48	1.20	0.42	0.49	0.73
32	1.8814E -04	0.68	1.08	2.44	0.77	0.75	2.08	0.22	0.50	1.04	0.56	0.55	0.94
33	1.1300E -04	0.74	1.06	2.19	0.56	0.60	1.70	0.15	0.40	0.82	1.05	0.50	0.83
34	6.8574E -05	0.73	1.05	2.43	0.39	0.62	1.56	0.29	0.42	0.78	1.61	0.94	0.88
35	4.2100E -05	0.74	0.96	2.18	0.22	0.52	1.54	0.56	0.39	0.73	2.53	1.42	0.89
36	2.5697E -05	0.59	1.07	2.11	0.17	0.46	1.39	0.91	0.50	0.76	3.80	2.59	0.84
37	1.5625E -05	0.68	1.07	2.31	0.28	0.46	1.26	1.21	0.67	0.84	4.74	3.93	0.90
38	9.5736E -06	0.52	0.97	2.26	0.30	0.43	1.09	1.69	1.01	0.96	6.68	5.63	1.11
39	5.8435E -06	0.56	0.73	2.04	0.60	0.49	0.81	2.44	1.66	0.87	9.07	7.95	2.20
40	3.5667E -06	0.75	0.76	1.85	0.83	0.54	0.77	3.75	2.84	0.90	10.47	9.63	3.73
41	2.1770E -06	0.71	0.47	1.65	1.23	0.82	0.77	4.86	3.91	1.22	10.65	10.17	5.53
42	1.3288E -06	0.71	0.64	1.19	1.52	1.09	0.79	6.27	5.59	1.95	11.62	11.33	8.04
43	8.111C7E -07	0.81	0.53	1.23	2.20	1.61	0.91	8.23	7.67	2.76	10.16	10.13	8.03
44	4.9506E -07	0.82	0.77	1.31	3.52	2.49	0.94	9.68	8.86	3.55	4.84	4.84	4.57
45	3.0217E -07	1.21	0.75	1.05	4.49	3.80	1.60	10.92	10.19	5.74	1.66	1.66	1.62
46	1.8444E -07	1.44	1.19	0.98	5.84	5.02	2.27	11.79	11.39	7.91	0.0	0.0	0.0
47	1.1258E -07	1.97	1.56	0.89	7.96	7.06	2.85	9.11	8.80	6.19	0.0	0.0	0.0
48	6.8714E -08	2.88	2.33	0.96	8.59	8.37	3.82	5.62	5.58	4.11	0.0	0.0	0.0
49	4.1942E -08	4.28	3.45	1.77	10.45	9.90	5.41	3.74	3.76	3.59	0.0	0.0	0.0
50	2.5600E -08	65.07	64.53	38.44	34.33	32.84	22.76	0.09	0.09	0.06	0.03	0.04	0.04

CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1750.00

CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1850.00

MID-POINT AESOPR COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER CM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.4420E 04	0.0	0.0	0.0	0.02	0.0	0.0	0.10	0.0	0.0	0.21	0.0	0.0
2	8.3065E 03	0.04	0.0	0.0	0.09	0.01	0.0	0.17	0.07	0.0	0.31	0.27	0.0
3	4.7848E 03	0.06	0.01	0.0	0.13	0.10	0.0	0.23	0.35	0.0	0.62	0.96	0.0
4	2.7562E 03	0.11	0.11	0.0	0.16	0.36	0.0	0.42	0.77	0.13	1.06	1.49	0.84
5	1.5877E 03	0.10	0.27	0.0	0.29	0.61	0.23	0.67	1.11	1.01	1.52	1.68	2.31
6	9.1454E 02	0.16	0.46	0.19	0.47	0.69	0.77	0.92	1.32	1.83	1.50	1.77	3.68
7	5.2680E 02	0.31	0.52	0.64	0.58	1.04	1.36	1.19	1.42	2.69	1.38	1.78	3.98
8	3.0345E 02	0.42	0.74	1.09	0.73	1.10	2.01	1.17	1.43	3.08	1.05	1.48	3.94
9	1.7480E 02	0.51	0.85	1.32	0.81	1.17	2.38	1.14	1.10	3.33	1.22	1.47	3.71
10	1.0066E 02	0.59	1.01	1.90	1.10	1.08	2.67	0.80	1.33	3.21	1.05	1.52	3.80
11	5.8000E 01	0.70	0.95	2.07	0.82	0.97	2.85	0.95	1.09	3.22	1.06	1.43	3.65
12	3.3410E 01	0.80	0.91	2.41	0.93	1.13	2.77	0.76	1.20	3.25	1.19	1.38	3.31
13	1.9245E 01	0.78	0.85	2.42	0.59	1.03	2.79	0.77	1.37	3.17	1.27	1.22	3.25
14	1.1085E 01	0.72	0.87	2.64	0.87	0.98	2.91	0.98	1.08	2.56	1.11	1.52	3.40
15	6.3658E 00	0.64	0.92	2.35	0.56	1.16	2.46	0.69	1.17	2.86	1.32	1.65	2.97
16	3.6784E 00	0.56	0.87	2.44	0.67	1.05	2.79	1.04	1.22	3.11	1.59	2.02	3.25
17	2.1189E 00	0.59	0.89	2.46	0.67	1.01	2.28	0.92	0.97	2.82	1.25	2.30	3.55
18	1.2220E 00	0.72	1.12	2.19	0.69	0.88	2.98	0.94	1.10	2.64	1.70	2.30	3.62
19	7.0307E-01	0.39	0.89	2.57	0.78	1.10	2.32	0.68	1.26	2.40	1.37	1.79	3.91
20	4.0499E-01	0.57	0.94	2.47	0.55	0.96	2.38	1.11	1.43	2.34	1.00	1.43	3.31
21	2.3329E-01	0.68	0.81	1.87	1.02	1.00	2.59	1.14	1.47	2.50	0.58	1.11	2.71
22	1.3436E-01	0.42	0.76	2.50	0.70	0.88	2.06	1.00	1.81	2.84	0.54	1.05	2.22
23	7.7467E-02	0.83	0.97	2.02	0.80	0.96	2.27	1.37	1.93	2.80	0.66	0.94	2.19
24	4.4586E-02	0.54	1.05	1.85	0.60	1.06	1.91	0.81	1.98	2.98	0.61	0.91	1.57
25	2.5624E-02	0.52	0.75	2.42	0.68	1.22	2.01	1.43	1.64	3.12	0.66	1.07	1.57
26	1.4793E-02	0.90	0.90	2.20	0.93	1.21	2.11	1.08	1.20	2.82	0.45	0.98	1.36
27	8.5224E-03	0.66	0.74	1.74	0.80	1.63	2.51	0.71	1.30	2.55	0.49	0.81	1.31
28	4.9092E-03	0.61	0.88	1.98	1.06	1.60	2.54	0.60	0.99	1.94	0.53	0.85	1.19
29	2.8278E-03	0.70	1.07	1.91	1.16	1.69	2.42	0.77	0.99	1.47	1.00	1.15	1.34
30	1.6289E-03	0.72	1.01	2.01	1.50	1.93	2.76	1.42	0.91	1.38	1.75	1.34	0.95
31	9.3831E-04	1.12	1.33	2.04	1.66	1.86	2.14	2.06	1.42	1.13	3.31	2.30	0.96
32	5.6474E-04	1.49	1.81	1.80	2.72	1.98	2.23	2.93	2.27	1.35	4.28	2.89	0.86
33	3.1134E-04	1.95	2.08	2.21	3.22	2.37	2.25	3.94	3.06	1.31	5.90	4.58	1.10
34	1.7934E-04	2.93	2.79	2.04	3.52	2.91	1.80	5.15	4.26	1.37	7.75	6.74	1.33
35	1.0331E-04	3.79	3.29	2.32	4.54	3.71	1.72	7.36	6.35	1.79	9.27	7.87	2.83
36	5.9506E-05	4.42	3.77	2.46	6.40	5.67	2.10	8.05	7.08	2.83	12.93	11.37	5.55
37	3.4278E-05	6.09	5.50	2.86	8.20	7.07	3.24	13.03	11.72	5.59	12.95	11.82	6.82
38	1.9745E-05	7.43	7.07	4.23	11.62	10.58	5.99	14.69	13.21	6.93	9.12	8.48	4.46
39	1.1374E-05	11.24	5.84	6.14	12.86	11.39	5.76	9.16	8.59	5.16	3.46	3.30	2.28
40	6.5517E-06	11.42	10.29	5.80	11.83	11.00	6.85	4.62	4.04	2.04	0.97	0.97	0.92
41	3.7740E-06	12.67	11.57	6.86	5.91	5.50	2.50	2.54	2.50	1.99	0.0	0.0	0.0
42	2.1739E-06	7.91	7.33	4.93	3.71	3.41	1.98	0.48	0.48	0.46	0.0	0.0	0.0
43	1.2523E-06	6.35	5.55	2.72	2.71	2.60	2.05	0.0	0.0	0.0	0.0	0.0	0.0
44	7.2134E-07	3.03	2.91	1.90	0.33	0.33	0.26	0.0	0.0	0.0	0.0	0.0	0.0
45	4.1551E-07	2.33	2.23	1.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	2.3535E-07	0.47	0.45	0.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	1.3787E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	7.9415E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	4.5748E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.6552E-08	0.01	0.01	0.0	0.01	0.01	0.0	0.01	0.01	0.0	0.01	0.01	0.0

CARBON MONOXIDE--FUNDAMENTAL BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 1950.00

	MID-FCINT AESOPP COEFF PER CM ⁻¹ OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	7.3907E 04	0.07	0.0	0.0	0.07	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
2	4.1190E 04	0.11	0.05	0.0	0.15	0.06	0.0	0.19	0.05	0.0	0.21	0.0	0.0
3	2.2956E 04	0.10	0.21	0.0	0.18	0.28	0.0	0.29	0.35	0.0	0.38	0.27	0.0
4	1.2794E 04	0.20	0.44	0.12	0.27	0.60	0.13	0.33	0.82	0.06	0.62	1.08	0.0
5	7.1305E 03	0.24	0.63	0.57	0.48	0.85	0.87	0.72	1.09	1.16	1.20	1.35	1.05
6	3.9740E 03	0.50	0.82	1.21	0.60	0.90	1.51	1.12	1.15	2.21	1.26	1.42	3.01
7	2.2148E 03	0.49	0.76	1.47	0.86	0.96	2.26	0.83	1.11	2.73	1.05	1.43	3.50
8	1.2344E 03	0.66	0.82	2.20	0.66	0.91	2.35	0.83	1.07	3.03	0.98	1.33	3.48
9	6.8794E 02	0.74	0.87	2.01	0.75	0.88	2.76	0.82	1.04	2.65	0.74	1.43	3.30
10	3.8341E 02	0.56	0.67	2.34	0.64	1.09	2.14	0.52	1.22	3.01	1.04	1.40	3.23
11	2.1368E 02	0.62	0.97	2.17	0.75	0.84	2.68	0.76	1.22	2.64	1.24	1.67	3.49
12	1.1599E 02	0.62	0.83	1.84	0.49	1.28	2.58	0.76	1.16	2.91	1.48	1.79	3.21
13	6.6372E 01	0.62	0.75	2.65	0.60	0.94	2.59	0.89	1.11	3.09	1.68	1.97	3.75
14	3.6591E 01	0.54	1.16	2.24	0.61	1.07	2.53	0.78	1.41	2.62	1.68	2.25	4.08
15	2.0616E 01	0.29	0.89	2.22	0.70	0.97	2.34	1.18	1.24	2.73	1.99	2.53	4.31
16	1.1490E 01	0.77	0.78	2.52	0.71	0.97	2.40	1.19	1.74	3.19	1.94	2.47	5.16
17	6.4035E 00	0.55	1.02	2.02	0.64	1.14	2.22	1.37	1.54	3.19	2.01	2.70	4.99
18	3.5668E 00	0.48	0.69	2.12	0.91	1.24	2.77	1.16	1.84	3.56	1.63	2.41	4.66
19	1.9895E 00	0.62	1.02	2.15	0.92	1.15	2.37	1.31	1.85	3.42	1.88	2.00	4.42
20	1.1085E 00	0.65	0.96	2.07	0.81	1.43	3.17	1.31	1.69	3.91	1.63	2.16	4.32
21	6.1780E-01	0.57	1.03	2.50	0.92	1.30	2.79	1.33	1.83	3.79	1.80	2.35	3.42
22	3.4431E-01	0.85	1.05	2.34	1.16	1.14	3.10	1.24	1.86	3.67	1.66	2.34	3.31
23	1.9190E-01	0.71	1.04	2.57	0.93	1.68	2.68	1.34	1.97	3.23	1.52	2.03	2.92
24	1.0695E-01	0.66	1.31	2.48	1.03	1.48	3.13	1.29	1.93	3.22	1.28	1.70	2.57
25	5.9605E-02	0.96	1.17	2.23	1.07	1.66	2.98	1.43	1.86	2.90	1.18	1.66	2.40
26	3.3219E-02	1.01	1.18	2.49	1.20	1.64	2.78	1.41	1.66	2.76	1.43	1.95	2.01
27	1.0514E-02	1.09	1.50	2.66	1.24	1.59	2.70	1.40	1.64	2.27	1.34	1.93	1.96
28	1.0318E-02	1.23	1.51	2.49	1.76	1.72	2.33	1.98	2.03	2.15	1.85	2.06	2.01
29	5.7506E-03	2.15	1.53	2.57	2.45	1.99	2.56	2.72	2.08	2.40	2.33	2.01	1.95
30	3.2049E-03	2.61	2.33	2.46	3.00	2.74	2.66	3.11	2.61	2.55	3.09	2.52	2.06
31	1.7662E-03	3.30	2.95	2.54	4.09	3.52	2.40	3.95	3.36	2.34	4.30	3.34	1.74
32	9.9549E-04	4.52	4.20	2.44	5.12	4.32	2.56	5.15	4.56	2.01	5.51	4.53	1.67
33	5.5481E-04	5.79	5.51	2.87	6.14	5.70	2.80	6.36	5.93	2.26	6.92	5.95	1.93
34	3.0921E-04	7.25	6.63	4.03	8.54	7.38	4.12	9.91	8.98	3.88	9.72	8.16	2.69
35	1.07233E-04	9.54	8.42	5.64	10.42	9.82	5.27	11.26	9.60	4.06	10.67	8.92	2.54
36	5.6644E-05	11.50	10.51	6.73	12.43	10.94	5.62	12.19	10.50	4.70	10.94	9.00	2.88
37	5.3527E-05	11.43	10.17	5.73	11.56	10.53	5.21	10.24	8.79	3.74	7.57	6.17	1.51
38	2.9832E-05	11.25	10.92	5.94	9.06	8.04	4.23	6.61	5.60	1.91	2.25	1.68	0.47
39	1.6626E-05	8.96	8.33	4.90	6.06	5.21	2.41	0.66	0.47	0.05	0.0	0.0	0.0
40	9.2262E-06	4.69	4.30	2.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	5.1643E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	2.8782E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	1.6041E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	8.9339E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	4.9624E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	2.7768E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	1.5476E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	8.6252E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	4.8070E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.6791E-08	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.04	0.0	0.04	0.04	0.0

CARBON MONOXIDE--FUNDAMENTAL BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2050.00

MID-POINT AESOPR COEFF	PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.4E26E 05	0.21	0.0	0.0	0.18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	6.1475E 04	0.07	0.18	0.0	0.07	0.13	0.0	0.22	0.0	0.0	0.0	0.0	0.0
3	4.4774E 04	0.16	0.57	0.0	0.18	0.51	0.0	0.19	0.22	0.0	0.33	0.0	0.0
4	2.4650E 04	0.33	0.52	0.77	0.47	0.73	0.17	0.49	0.90	0.0	0.18	0.63	0.0
5	1.3522E 04	0.53	0.90	1.30	0.48	0.77	1.62	0.75	0.94	1.12	0.97	1.00	0.04
6	7.4306E 03	0.59	0.63	1.80	0.80	0.84	2.02	0.68	1.02	2.22	1.04	1.14	2.04
7	4.0834E 03	0.57	0.77	1.91	0.72	0.75	1.87	0.89	0.83	2.23	1.10	1.24	2.47
8	2.2440E 03	0.47	0.63	1.63	0.65	0.76	2.11	0.75	0.98	2.26	1.21	1.54	2.85
9	1.2332E 03	0.62	0.64	1.97	0.43	0.94	1.99	0.92	1.31	2.42	1.53	1.93	3.07
10	6.7776E 02	0.46	0.88	1.90	0.77	1.15	2.25	1.02	1.56	2.77	1.99	2.41	4.14
11	3.7242E 02	0.53	0.93	1.99	0.85	1.01	2.41	1.28	1.35	3.33	1.99	2.47	5.05
12	2.0466E 02	0.67	0.92	2.27	0.70	1.25	2.79	1.25	1.93	3.99	2.10	2.89	5.21
13	1.1247E 02	0.70	0.89	2.25	1.17	1.29	3.00	1.55	1.80	3.64	2.18	2.61	5.68
14	6.1802E 01	0.67	1.16	2.78	0.91	1.24	3.57	1.34	2.08	4.41	1.92	2.40	5.90
15	3.3965E 01	0.73	1.14	2.59	0.95	1.80	3.01	1.35	1.86	4.23	1.75	2.16	5.11
16	1.8665E 01	1.00	0.98	2.99	1.24	1.20	3.38	1.45	2.07	4.13	1.66	2.40	4.71
17	1.0257E 01	0.79	1.36	2.58	1.02	1.72	3.60	1.41	1.81	4.10	1.63	1.97	4.20
18	5.6368E 00	0.61	1.26	2.45	1.05	1.65	3.39	1.31	1.83	3.65	1.39	1.91	4.43
19	3.0576E 00	1.07	1.42	3.28	0.88	1.71	3.36	1.18	1.60	3.81	1.24	2.11	3.91
20	1.7023E 00	0.95	1.68	3.22	1.09	1.68	2.95	1.22	1.62	3.55	1.51	2.18	3.72
21	9.3547E-01	0.76	1.37	2.76	1.15	1.33	3.32	0.99	1.67	3.15	1.28	1.93	3.12
22	5.1408E-01	0.89	1.26	2.83	1.05	1.43	2.94	1.20	1.56	3.11	1.26	2.08	2.84
23	2.8251E-01	0.72	1.42	2.54	0.87	1.30	2.82	1.10	1.37	2.89	1.45	1.93	2.40
24	1.5525E-01	1.05	1.19	2.69	0.98	1.19	2.80	1.09	1.69	2.79	1.30	1.96	2.47
25	8.5316E-02	1.32	1.15	2.75	1.35	1.35	2.64	0.93	1.66	2.47	1.44	2.11	2.34
26	4.6885E-02	1.70	1.39	2.15	1.40	1.47	2.50	1.20	1.85	2.38	1.45	1.97	2.24
27	2.5765E-02	1.96	1.66	2.19	2.02	1.65	2.23	1.69	1.87	2.59	1.42	1.85	1.74
28	1.4159E-02	2.51	2.45	2.47	2.23	2.39	2.30	2.21	2.06	2.21	2.05	1.98	1.79
29	7.7809E-03	3.60	3.13	2.40	3.28	3.23	2.41	3.22	2.76	2.14	2.72	2.01	1.34
30	4.2759E-03	4.38	3.81	2.43	3.90	3.89	2.17	3.64	3.55	1.76	3.33	2.45	1.50
31	2.3498E-03	5.20	5.20	3.51	5.21	4.82	2.94	5.29	4.46	1.89	4.34	3.32	1.45
32	1.2913E-03	8.00	7.39	4.52	7.59	6.68	4.11	6.81	6.04	2.50	5.65	4.60	1.73
33	7.0963E-04	10.06	9.38	5.34	9.61	8.84	4.36	9.01	7.70	3.79	7.49	5.82	2.15
34	3.8597E-04	13.88	12.59	7.42	13.34	11.59	5.99	12.00	9.90	4.59	9.98	8.24	2.90
35	2.1431E-04	18.72	16.85	9.48	16.62	14.65	6.66	14.79	12.72	4.63	12.16	10.12	2.33
36	1.1777E-04	11.48	10.60	6.08	13.44	12.04	6.08	14.24	12.27	5.13	12.26	10.58	3.35
37	6.4719E-05	2.04	1.70	0.76	1.35	1.02	0.24	1.34	1.16	0.12	4.70	4.02	1.75
38	3.5556E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	1.9545E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	1.0741E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	5.9025E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	3.2437E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	1.7825E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	9.7557E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	5.3831E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	2.9582E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	1.6257E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	8.9338E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	4.9056E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.6588E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.03

CARBON MONOXIDE--FUNDAMENTAL BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2150.00

MID-POINT AESOPR COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
PER GM OF CC												
1	1.5560E 05	0.14	0.0	0.0	0.06	0.0	0.0	0.08	0.0	0.0	0.0	0.0
2	8.5424E 04	0.13	0.12	0.0	0.16	0.04	0.0	0.08	0.0	0.0	0.0	0.0
3	4.6898E 04	0.15	0.42	0.0	0.18	0.26	0.0	0.26	0.06	0.0	0.14	0.0
4	2.5747E C4	0.29	0.74	0.35	0.40	0.79	0.04	0.43	0.71	0.0	0.41	0.18
5	1.4135E 04	0.62	0.75	1.17	0.82	0.77	0.90	0.81	0.99	0.32	0.95	1.19
6	7.7604E 03	0.86	0.93	2.07	0.73	1.49	2.26	1.33	1.64	2.03	1.68	1.84
7	4.2605E 03	0.64	1.33	2.03	1.16	1.16	2.15	1.31	1.82	3.03	2.02	2.70
8	2.3390E 03	0.90	1.05	2.29	1.01	1.71	3.42	1.52	1.95	3.59	2.09	2.57
9	1.2841E 03	0.87	1.24	3.14	1.21	1.30	2.98	1.35	1.95	4.68	1.95	2.56
10	7.0500E 02	0.73	1.12	2.73	0.82	1.53	4.18	1.26	1.56	4.68	1.83	2.39
11	3.8705E 02	0.54	1.15	3.37	0.95	1.31	3.50	1.15	1.76	4.41	1.86	2.19
12	2.1249E 02	0.65	1.38	3.07	0.90	1.27	3.65	1.29	1.64	4.23	1.72	1.99
13	1.1666E 02	0.73	1.10	2.87	0.84	1.44	3.60	1.28	1.69	4.26	1.60	1.98
14	6.4047E 01	0.78	1.06	3.49	0.93	1.46	3.52	1.26	1.60	4.08	1.37	2.10
15	3.5162E 01	0.75	1.09	2.99	1.14	1.19	3.32	1.25	1.50	3.62	1.44	2.22
16	1.9304E 01	0.66	1.10	2.71	0.91	1.28	3.30	1.08	1.50	3.67	1.29	2.01
17	1.0598E 01	0.70	1.18	2.90	0.91	1.37	3.01	0.93	1.65	3.06	1.20	1.87
18	5.8184E CC	1.02	1.11	2.90	1.03	1.32	2.87	0.92	1.65	3.11	1.04	1.75
19	3.1543E 0C	0.79	1.12	2.57	0.84	1.32	2.81	1.00	1.64	3.44	1.21	1.81
20	1.7537E 0C	0.59	1.31	2.53	0.79	1.18	2.84	0.99	1.58	3.24	1.36	1.79
21	9.6279E-01	0.89	1.04	2.52	0.70	1.29	2.71	0.94	1.57	2.90	1.33	1.84
22	5.2858E-01	0.74	1.20	2.55	0.62	1.46	2.84	1.08	1.62	2.74	1.29	1.78
23	2.9019E-01	0.77	1.16	2.61	0.84	1.30	2.54	0.88	1.53	2.58	1.30	1.58
24	1.5532E-01	0.79	1.14	2.13	0.93	1.52	2.30	0.84	1.53	2.13	1.22	1.76
25	8.7466E-02	1.00	1.13	2.33	1.11	1.48	2.37	1.04	1.36	1.89	1.25	1.81
26	4.8C19E-02	1.09	1.50	2.09	1.18	1.50	2.45	1.29	1.35	1.64	1.22	1.50
27	2.6363E-02	1.95	1.85	2.29	1.80	1.60	2.35	1.30	1.45	2.00	1.35	1.71
28	1.4473E-02	2.50	2.14	2.00	2.26	1.86	1.94	2.17	1.58	1.56	1.64	1.82
29	7.9459E-03	3.63	3.09	2.28	3.55	2.79	2.13	2.89	2.11	1.43	2.24	1.87
30	4.3623E-03	5.12	4.40	2.72	4.49	3.83	1.90	4.78	3.50	1.63	3.76	2.40
31	2.3949E-03	6.84	6.18	3.22	6.62	5.42	1.92	6.35	5.19	2.14	4.92	3.56
32	1.3148E-03	9.97	8.88	4.58	9.37	7.99	3.24	8.34	7.39	2.56	7.15	5.53
33	7.2165E-04	12.02	10.85	6.18	11.41	10.39	5.26	10.81	9.37	4.45	9.68	8.06
34	3.9630E-04	15.72	14.45	7.40	14.65	13.04	6.24	13.42	12.17	5.73	12.44	10.77
35	2.1757E-04	14.29	12.81	7.02	15.43	14.23	7.69	15.24	13.94	6.33	13.36	11.89
36	1.1945E-04	7.86	7.17	4.09	6.73	5.93	2.83	7.07	5.63	2.33	9.01	7.42
37	6.5577E-05	1.86	1.69	0.81	2.50	2.16	0.90	2.04	1.80	0.51	1.66	1.54
38	3.6CC2E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	1.9765E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	1.0851E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	5.9574E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	3.2707E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	1.7956E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	9.858CE-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	5.4121E-C7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	2.9713E-C7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	1.6312E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	8.9557E-C8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	4.9167E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.6993E-C8	0.02	0.02	0.0	0.02	0.02	0.0	0.02	0.02	0.0	0.02	0.02

CARBON MONOXIDE--FUNDAMENTAL BAND
CAPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2250.00

MID-POINT ABSORP COEFF PER GM OF CG	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.5560E 05	0.16	0.0	0.0	0.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.5424E 04	0.07	0.21	0.0	0.09	0.10	0.0	0.21	0.0	0.0	0.0	0.0
3	4.6896E 04	0.14	0.41	0.0	0.19	0.47	0.0	0.23	0.39	0.0	0.38	0.0
4	2.5747E 04	0.50	0.55	0.62	0.57	0.65	0.27	0.63	0.81	0.04	0.66	0.82
5	1.4135E 04	0.45	0.74	1.24	0.67	0.97	1.36	0.98	1.18	1.14	1.26	1.43
6	7.7604E 03	0.66	0.84	1.44	0.87	0.97	1.92	1.08	1.34	2.28	1.64	1.99
7	4.2605E 03	0.70	0.94	2.03	0.83	1.14	2.36	1.13	1.35	3.12	1.44	1.67
8	2.3390E 03	0.71	0.89	2.33	0.85	1.13	2.79	1.06	1.35	3.52	1.46	1.99
9	1.2641E 03	0.62	0.94	2.31	0.79	1.04	2.98	0.84	1.41	3.34	1.73	2.10
10	7.0500E 02	0.65	0.98	2.63	0.70	1.02	2.90	1.24	1.55	3.39	1.52	2.04
11	3.8705E 02	0.62	0.86	2.43	0.74	1.21	2.59	1.15	1.60	3.61	1.48	2.01
12	2.1249E 02	0.52	0.57	2.49	0.87	1.40	2.94	1.17	1.72	3.59	1.32	2.30
13	1.1666E 02	0.63	1.11	2.46	0.95	1.42	3.08	0.98	1.52	3.96	1.32	2.09
14	6.4047E 01	0.68	1.20	2.43	0.91	1.42	3.29	1.03	1.65	3.97	1.27	1.80
15	3.5162E 01	0.71	1.21	2.65	0.77	1.34	3.30	0.94	1.56	3.93	1.13	1.64
16	1.9304E 01	0.87	1.19	2.99	0.87	1.10	3.21	0.92	1.55	3.72	1.17	1.50
17	1.0598E 01	0.69	1.05	2.53	0.74	1.22	2.96	1.06	1.51	3.92	1.54	1.78
18	5.8184E 00	0.70	1.11	2.90	0.73	1.31	3.29	0.81	1.32	3.56	1.57	1.71
19	3.1943E 00	0.62	0.90	2.75	0.69	1.30	3.26	0.79	1.26	2.99	1.43	1.96
20	1.7537E 00	0.61	1.16	2.98	0.75	1.26	3.38	1.09	1.43	2.66	1.35	1.97
21	9.6279E-01	0.66	1.11	2.94	0.85	1.16	3.16	1.08	1.37	2.47	1.25	1.85
22	5.2658E-01	0.56	1.04	2.78	0.64	1.23	2.74	1.17	1.45	2.39	1.31	1.65
23	2.9019E-01	0.58	1.17	2.69	0.77	1.38	2.25	1.19	1.68	2.34	1.13	1.56
24	1.5532E-01	0.83	1.12	2.70	0.91	1.16	2.29	1.03	1.61	2.31	0.95	1.56
25	8.7466E-02	0.99	1.16	2.33	1.08	1.22	2.11	1.07	1.59	2.08	0.90	1.59
26	4.8019E-02	1.19	1.23	2.31	1.18	1.34	1.92	1.18	1.38	2.22	0.92	1.36
27	2.6336E-02	1.47	1.48	2.06	1.60	1.47	1.83	1.33	1.43	2.02	1.13	1.46
28	1.4473E-02	2.20	2.03	2.26	2.11	2.00	1.88	1.85	1.66	2.03	1.14	1.46
29	7.9459E-03	2.66	2.15	2.15	2.83	2.36	1.90	2.77	2.22	2.28	1.51	1.55
30	4.3623E-03	3.46	3.07	1.84	3.39	2.89	1.84	3.22	2.65	1.96	2.69	1.81
31	2.3549E-03	5.11	4.70	2.42	5.02	4.78	2.56	5.10	3.94	1.73	4.04	2.51
32	1.3148E-03	6.85	6.48	2.82	7.05	6.01	3.05	6.55	5.88	1.92	6.18	4.71
33	7.2165E-04	9.63	6.59	4.70	9.01	8.00	3.79	8.81	7.54	2.78	8.34	6.80
34	3.9630E-04	13.96	12.47	6.71	13.72	11.91	5.65	12.62	11.03	4.41	11.26	9.83
35	2.1757E-04	13.13	11.88	6.06	13.92	12.63	6.18	14.67	12.93	5.55	15.29	13.03
36	1.1945E-04	10.35	6.66	6.25	11.08	10.19	5.75	11.56	10.25	5.27	13.20	11.76
37	6.5577E-05	7.69	7.16	4.90	7.68	6.80	4.08	6.34	5.82	2.84	4.54	4.16
38	3.6002E-05	5.15	4.29	2.00	3.01	2.57	0.71	1.12	1.07	0.66	0.55	0.55
39	1.9765E-05	2.15	1.94	0.83	0.43	0.43	0.43	0.0	0.0	0.0	0.0	0.0
40	1.0851E-05	0.07	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	5.9674E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	3.2707E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	1.7956E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	5.88580E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	5.4121E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	2.5713E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	1.6312E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	8.9557E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	4.9167E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.6553E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CARBON MONOXIDE--FUNDAMENTAL BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2350.00

MID-FCINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.1411E 04	0.0	0.0	0.0	0.01	0.0	0.0	0.04	0.0	0.07	0.0	0.0
2	6.6045E 03	0.02	0.0	0.0	0.04	0.0	0.0	0.05	0.05	0.13	0.15	0.0
3	3.8224E 03	0.03	0.0	0.0	0.04	0.07	0.0	0.12	0.18	0.29	0.28	0.0
4	2.2123E 03	0.03	0.04	0.0	0.09	0.15	0.0	0.25	0.25	0.06	0.33	0.37
5	1.2804E 02	0.04	0.16	0.0	0.19	0.24	0.09	0.26	0.27	0.41	0.31	0.75
6	7.4103E 02	0.15	0.19	0.07	0.21	0.20	0.34	0.24	0.31	0.60	0.30	0.92
7	4.2688E 02	0.18	0.19	0.31	0.21	0.27	0.51	0.23	0.28	0.77	0.33	0.47
8	2.4822E 02	0.17	0.20	0.41	0.21	0.20	0.65	0.22	0.32	0.78	0.27	0.39
9	1.4366E 02	0.19	0.19	0.52	0.18	0.29	0.67	0.21	0.31	0.93	0.25	0.34
10	8.3144E 01	0.16	0.23	0.58	0.15	0.24	0.74	0.24	0.40	0.94	0.25	0.44
11	4.8120E 01	0.13	0.22	0.58	0.16	0.24	0.74	0.20	0.33	1.09	0.28	0.51
12	2.7655E 01	0.18	0.20	0.70	0.18	0.30	0.84	0.16	0.32	1.16	0.23	0.50
13	1.6119E 01	0.09	0.23	0.69	0.16	0.36	0.81	0.19	0.36	0.89	0.27	0.66
14	9.3288E 00	0.14	0.21	0.74	0.19	0.30	1.01	0.18	0.36	0.80	0.20	0.39
15	5.3591E 00	0.16	0.30	0.69	0.16	0.34	1.08	0.22	0.38	0.62	0.36	0.39
16	3.1248E 00	0.09	0.36	0.78	0.13	0.25	0.83	0.19	0.42	0.49	0.33	0.32
17	1.8085E 00	0.17	0.28	0.88	0.11	0.26	0.64	0.24	0.29	0.56	0.30	0.37
18	1.0467E 00	0.18	0.30	1.03	0.16	0.35	0.55	0.14	0.21	0.48	0.33	0.62
19	6.0579E-01	0.13	0.18	0.74	0.16	0.33	0.49	0.12	0.23	0.40	0.23	0.27
20	3.5061E-01	0.07	0.25	0.65	0.16	0.30	0.49	0.28	0.29	0.54	0.17	0.24
21	2.0292E-01	0.11	0.25	0.51	0.17	0.23	0.46	0.23	0.23	0.44	0.16	0.29
22	1.1744E-01	0.11	0.29	0.49	0.17	0.15	0.48	0.28	0.27	0.52	0.10	0.25
23	6.7970E-02	0.16	0.23	0.45	0.11	0.19	0.38	0.23	0.40	0.74	0.08	0.20
24	3.9338E-02	0.11	0.26	0.48	0.11	0.16	0.43	0.28	0.40	0.54	0.06	0.13
25	2.2767E-02	0.16	0.17	0.49	0.17	0.26	0.34	0.18	0.29	0.76	0.05	0.14
26	1.3177E-02	0.12	0.22	0.33	0.25	0.28	0.29	0.15	0.18	0.79	0.15	0.11
27	7.6263E-03	0.16	0.16	0.32	0.22	0.30	0.38	0.13	0.21	0.57	0.19	0.14
28	4.4138E-03	0.13	0.19	0.29	0.20	0.32	0.46	0.18	0.13	0.56	0.24	0.29
29	2.5545E-03	0.12	0.21	0.34	0.25	0.22	0.53	0.19	0.18	0.44	0.28	0.24
30	1.4785E-03	0.20	0.21	0.32	0.38	0.31	0.71	0.35	0.22	0.41	0.37	0.23
31	8.5567E-04	0.29	0.23	0.28	0.48	0.25	0.69	0.52	0.26	0.55	0.57	0.37
32	4.9523E-04	0.53	0.30	0.30	0.62	0.42	0.71	0.71	0.57	0.45	0.92	0.69
33	2.8662E-04	0.58	0.36	0.44	0.74	0.70	0.65	1.03	0.89	0.33	1.37	1.05
34	1.6588E-04	0.78	0.64	0.55	1.06	0.91	0.48	1.41	1.28	0.37	1.89	1.64
35	9.6007E-05	1.05	0.94	0.50	1.40	1.21	0.52	2.06	1.89	0.61	2.84	2.52
36	5.5565E-05	1.48	1.41	0.78	2.06	1.86	0.98	3.14	2.71	1.65	4.93	4.56
37	3.2159E-05	1.95	1.84	1.39	3.14	2.87	2.04	6.16	5.72	3.67	8.87	8.53
38	1.8612E-05	3.04	2.95	2.34	5.25	5.08	3.29	6.09	5.76	3.07	0.11	0.11
39	1.0772E-05	4.58	4.38	3.58	4.37	3.96	2.06	1.16	1.12	0.36	0.17	0.16
40	6.2344E-06	3.63	3.10	1.60	3.41	3.13	1.96	0.10	0.09	0.02	0.26	0.26
41	3.6082E-06	3.02	2.94	1.90	0.75	0.72	0.03	0.15	0.16	0.15	0.46	0.46
42	2.0883E-06	2.46	2.24	1.22	0.08	0.07	0.0	0.29	0.28	0.29	0.68	0.68
43	1.2086E-06	1.10	0.93	0.06	0.15	0.15	0.10	0.63	0.63	0.62	1.23	1.23
44	6.9951E-07	0.07	0.07	0.02	0.40	0.40	0.39	1.00	1.00	1.00	2.87	2.87
45	4.0485E-07	0.28	0.28	0.19	1.16	1.16	1.16	3.45	3.45	3.45	2.92	2.92
46	2.3431E-07	3.47	3.47	3.46	5.00	5.00	5.00	5.07	5.07	5.07	5.49	5.49
47	1.3561E-07	10.61	10.61	10.61	9.87	9.87	9.87	8.98	8.98	8.98	8.02	8.02
48	7.8486E-08	14.22	14.22	14.22	13.39	13.39	13.39	11.95	11.95	11.95	11.08	11.08
49	4.5425E-08	16.52	16.52	16.52	15.61	15.61	15.61	14.66	14.66	14.66	13.29	13.29
50	2.6290E-08	26.65	26.65	26.65	26.13	26.13	26.13	25.46	25.46	25.46	25.12	25.12

Appendix B

**Opacity Probability Distribution Functions
for the First-Overtone Band**

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CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2450.00

MID-POINT ABSORP COEFF PER GM/OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 1.8665E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 1.6257E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 1.4159E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4 1.2332E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 1.0741E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
6 9.3547E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7 8.1476E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
8 7.0963E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
9 6.1806E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.0
10 5.3831E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.01	0.0
11 4.6885E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.02	0.0
12 4.0835E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.06	0.0
13 3.5566E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.05	0.0
14 3.0976E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.07	0.04
15 2.6979E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.06	0.02
16 2.3498E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.10	0.02
17 2.0466E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.07	0.02
18 1.7825E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.11	0.01
19 1.5525E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.11	0.04
20 1.3522E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.06	0.05
21 1.1777E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.04	0.15
22 1.0257E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.10	0.19
23 8.9337E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.01	0.19
24 7.7810E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.03	0.22
25 6.7769E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.06	0.18
26 5.9025E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.06	0.25
27 5.1408E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.06	0.18
28 4.4775E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.03	0.21
29 3.8997E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.06	0.16
30 3.3965E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.17
31 2.9582E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.05	0.12
32 2.5765E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.04	0.17
33 2.2441E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.04	0.07
34 1.9545E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.03	0.10
35 1.7023E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.07
36 1.4826E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.02	0.10
37 1.2913E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.02	0.12
38 1.1247E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12
39 9.7957E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.07
40 8.5318E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.13
41 7.4309E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.02	0.08
42 6.4720E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.10
43 5.6369E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.07
44 4.9096E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.02	0.14
45 4.2760E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.02	0.10
46 3.7242E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.11
47 3.2437E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.04
48 2.8251E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.08
49 2.4606E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.07
50 2.1431E-08	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	98.74	98.42	96.04

CARBON MONOXIDE--FIRST OVERTONE BAND
 CAPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2550.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
PER GM OF CO												
1	4.6237E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
2	3.9540E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
3	3.3812E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
4	2.8914E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.0
5	2.4726E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.03	0.0
6	2.1145E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.03	0.0
7	1.8082E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.04	0.0
8	1.5463E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.07	0.0
9	1.3223E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.10	0.0
10	1.1307E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.15	0.0
11	9.6695E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.12	0.0
12	8.2689E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.14	0.07
13	7.0711E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.19	0.09
14	6.0468E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.14	0.14
15	5.1709E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.19	0.18
16	4.4219E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.14	0.30
17	3.7814E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.19	0.30
18	3.2337E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.10	0.42
19	2.7653E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.11	0.34
20	2.3647E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.09	0.40
21	2.0222E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.10	0.44
22	1.7293E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.08	0.43
23	1.4788E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.10	0.34
24	1.2646E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.09	0.33
25	1.0814E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.09	0.29
26	9.2475E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.07	0.30
27	7.9080E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.10	0.24
28	6.7625E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.04	0.24
29	5.7829E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.05	0.28
30	4.9453E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.04	0.25
31	4.2228E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.03	0.17
32	3.6164E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.06	0.23
33	3.0925E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.17
34	2.6446E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.04	0.19
35	2.2615E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.08	0.12
36	1.9339E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.06	0.13
37	1.6538E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.03	0.17
38	1.4142E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.04	0.14
39	1.2094E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.07	0.10
40	1.0342E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.06	0.16
41	8.8439E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.04	0.13
42	7.5629E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.08	0.14
43	6.4674E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.05	0.13
44	5.5306E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.08	0.17
45	4.7295E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.06	0.19
46	4.0444E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.07	0.22
47	3.4526E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.07	0.19
48	2.9576E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.05	0.15
49	2.5291E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.06	0.14
50	2.1628E-08	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	97.40	96.34	91.58

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2650.00

MID-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.8240E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.5172E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
3	1.2619E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
4	1.0496E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0
5	8.7303E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.01	0.0
6	7.2616E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.04	0.0
7	6.0399E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.08	0.0
8	5.0238E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.13	0.0
9	4.1786E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.22	0.0
10	3.4756E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.30	0.0
11	2.8909E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.38	0.06
12	2.4045E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.41	0.07
13	2.0000E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.38	0.24
14	1.6635E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.33	0.46
15	1.3837E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.40	0.58
16	1.1509E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.34	0.73
17	9.5727E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.19	0.73
18	7.9622E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.35	0.95
19	6.6227E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.23	0.84
20	5.5085E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.17	0.88
21	4.5818E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.16	0.83
22	3.8109E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.17	0.83
23	3.1698E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.11	0.64
24	2.6365E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.18	0.58
25	2.1930E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.16	0.60
26	1.8240E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.18	0.50
27	1.5172E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.10	0.51
28	1.2619E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.10	0.46
29	1.0496E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.13	0.47
30	8.7304E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.11	0.37
31	7.2616E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.06	0.41
32	6.0400E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.03	0.36
33	5.0238E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.09	0.37
34	4.1786E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.05	0.27
35	3.4756E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.04	0.37
36	2.8909E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.08	0.34
37	2.4046E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.04	0.04	0.30
38	2.0000E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.07	0.11	0.34
39	1.6635E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.06	0.06	0.21
40	1.3837E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.01	0.03	0.09	0.23
41	1.1509E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.01	0.04	0.07	0.32
42	9.5728E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.04	0.04	0.08	0.32
43	7.9623E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.09	0.07	0.06	0.25
44	6.6228E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.14	0.06	0.08	0.34
45	5.5086E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.18	0.05	0.11	0.31
46	4.5818E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.19	0.07	0.15	0.29
47	3.8110E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.18	0.03	0.22	0.35
48	3.1698E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.15	0.05	0.23	0.36
49	2.6366E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.12	0.02	0.34	0.37
50	2.1930E-08	100.00	100.00	100.00	100.00	100.00	100.00	98.95	98.89	99.65	95.00	92.65
												82.56

CARBON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2750.00

MID-POINT ABSORP. COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 5.4123E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
2 4.4039E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
3 3.5834E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.01	0.0
4 2.9158E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.04	0.0
5 2.3725E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.10	0.0
6 1.9305E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.23	0.0
7 1.5708E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.25	0.0
8 1.2782E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.33	0.0
9 1.0400E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.51	0.11
10 8.4625E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.49	0.13
11 6.8858E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.59	0.38
12 5.6029E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.53	0.67
13 4.5590E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.58	0.96
14 3.7096E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.59	1.04
15 3.0185E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.46	1.34
16 2.4561E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.35	1.42
17 1.9985E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.41	1.61
18 1.6262E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.37	1.43
19 1.3232E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.29	1.21
20 1.0767E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.29	1.10
21 8.7606E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.19	0.94
22 7.1284E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.25	0.84
23 5.9003E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.15	0.64
24 4.7196E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.17	0.73
25 3.8403E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.14	0.69
26 3.1248E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.18	0.62
27 2.5426E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.16	0.65
28 2.0689E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.11	0.60
29 1.6634E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.13	0.22	0.60
30 1.3698E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.08	0.18	0.60
31 1.1146E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.09	0.15	0.65
32 9.0692E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.01	0.0	0.13	0.20	0.36
33 7.3795E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.04	0.0	0.06	0.18	0.46
34 6.0046E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.07	0.0	0.10	0.20	0.41
35 4.8859E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.14	0.0	0.08	0.23	0.41
36 3.9756E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.20	0.0	0.05	0.13	0.50
37 3.2349E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.27	0.0	0.11	0.20	0.38
38 2.6322E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.30	0.05	0.02	0.14	0.44
39 2.1418E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.39	0.14	0.04	0.09	0.33
40 1.7427E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.44	0.19	0.05	0.14	0.47
41 1.4180E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.45	0.39	0.04	0.12	0.39
42 1.1538E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.50	0.66	0.03	0.13	0.43
43 9.3888E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.54	0.84	0.03	0.13	0.36
44 7.6395E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.72	0.94	0.02	0.10	0.42
45 6.2161E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.62	0.91	0.05	0.14	0.37
46 5.0580E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.55	1.27	0.01	0.19	0.47
47 4.1156E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.52	1.49	0.05	0.18	0.37
48 3.3488E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.37	1.55	0.05	0.16	0.42
49 2.7249E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.36	1.74	0.11	0.17	0.43
50 2.2172E-08	100.00	100.00	100.00	100.00	100.00	100.00	94.98	93.51	89.83	92.74	88.85	73.62

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2850.00

PER GM OF CO	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	2.6629E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.0982E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
3	1.6532E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0
4	1.3026E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.02	0.0
5	1.0263E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.09	0.0
6	8.0863E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.25	0.0
7	6.3713E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.36	0.0
8	5.0200E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.47	0.02
9	3.9554E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.64	0.09
10	3.1165E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.60	0.37
11	2.4555E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.74	0.69
12	1.9347E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.69	0.98
13	1.5244E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.84	1.30
14	1.2011E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.78	1.63
15	9.4636E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.57	1.76
16	7.4565E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.67	2.15
17	5.8751E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.58	2.07
18	4.6290E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.46	1.84
19	3.6473E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.45	1.88
20	2.8737E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.38	1.71
21	2.2643E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.39	1.48
22	1.7840E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.31	1.19
23	1.4057E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.14	0.32	1.11
24	1.1075E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.11	0.30	0.94
25	8.7265E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.09	0.29	0.92
26	6.8757E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.08	0.37	0.91
27	5.4175E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.02	0.0	0.09	0.31	0.88
28	4.2685E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.03	0.0	0.10	0.28	0.77
29	3.3632E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.18	0.0	0.12	0.25	0.72
30	2.6499E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.25	0.0	0.08	0.30	0.69
31	2.0879E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.34	0.0	0.12	0.25	0.66
32	1.6451E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.42	0.05	0.12	0.22	0.53
33	1.2962E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.58	0.15	0.13	0.25	0.48
34	1.0213E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.51	0.43	0.11	0.30	0.64
35	8.0468E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.69	0.72	0.04	0.18	0.54
36	6.3402E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.68	0.99	0.10	0.30	0.58
37	4.9955E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.61	0.72	1.14	0.08	0.22	0.63
38	3.9360E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.75	1.30	0.04	0.27	0.53
39	3.1012E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.65	1.57	0.08	0.22	0.50
40	2.4435E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.58	1.93	0.13	0.22	0.49
41	1.9253E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.59	1.94	0.08	0.25	0.46
42	1.5169E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.45	1.93	0.11	0.23	0.46
43	1.1952E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.55	1.78	0.11	0.17	0.38
44	9.4175E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.40	1.73	0.09	0.21	0.44
45	7.4201E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.36	1.54	0.19	0.23	0.46
46	5.8464E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.42	1.39	0.18	0.27	0.48
47	4.6065E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.32	1.33	0.20	0.27	0.56
48	3.6295E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.39	1.44	0.17	0.21	0.49
49	2.8597E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.40	1.47	0.19	0.32	0.58
50	2.2532E-08	100.00	100.00	100.00	100.00	100.00	100.00	92.39	89.72	77.17	89.46	83.70	64.01

CAREON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 2950.00

MID-POINT ABSORP_COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB_VEL			TURB_VEL			TURB_VEL			TURB_VEL			
	PER GM OF CO	0 KM/S	2 KM/S	E KM/S	0 KM/S	2 KM/S	B KM/S	0 KM/S	2 KM/S	B KM/S	0 KM/S	2 KM/S	B KM/S
1	7.0318E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0
2	5.4329E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0
3	4.1975E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.03	0.0
4	3.2430E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.26	0.0
5	2.5056E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.41	0.0
6	1.9358E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67	0.71	0.0
7	1.4495E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.71	0.07
8	1.1555E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.93	0.53
9	8.9277E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.71	0.95	0.91
10	6.8976E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.88	1.45
11	5.3292E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.66	0.80	1.74
12	4.1173E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.84	2.55
13	3.1811E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.85	2.33
14	2.4577E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47	0.76	2.41
15	1.8589E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.79	2.31
16	1.4467E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.70	2.15
17	1.1335E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.48	2.28
18	8.7573E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.49	1.90
19	6.7660E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.40	1.51
20	5.2274E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.21	0.51	1.52
21	4.0388E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0	0.23	0.51	1.39
22	3.1204E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.22	0.52	1.31
23	2.4108E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.09	0.0	0.28	0.38	1.16
24	1.8626E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.27	0.0	0.26	0.51	1.06
25	1.4391E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.38	0.0	0.08	0.42	1.04
26	1.1118E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.47	0.0	0.22	0.51	1.11
27	8.5902E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.73	0.07	0.18	0.47	0.85
28	6.6368E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.71	0.66	0.12	0.41	0.92	
29	5.1277E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.65	0.87	0.69	0.10	0.31	0.84
30	3.9617E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.66	0.89	1.17	0.13	0.44	0.87
31	3.0608E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.79	1.62	0.11	0.25	0.78
32	2.3648E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.82	1.93	0.06	0.28	0.68
33	1.8271E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.85	2.07	0.16	0.26	0.71
34	1.4116E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.62	2.46	0.07	0.27	0.54
35	1.0906E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.80	2.35	0.15	0.26	0.67
36	8.4262E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.47	0.75	2.20	0.12	0.24	0.68
37	6.5101E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.59	2.15	0.12	0.28	0.57
38	5.0298E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.55	1.97	0.10	0.22	0.69
39	3.8860E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.39	1.81	0.14	0.25	0.53
40	3.0024E-07	0.0	0.0	0.0	0.02	0.0	0.0	0.23	0.46	1.58	0.20	0.22	0.43
41	2.3197E-07	0.0	0.0	0.0	0.07	0.0	0.0	0.19	0.48	1.42	0.18	0.23	0.53
42	1.7922E-07	0.0	0.0	0.0	0.06	0.0	0.0	0.17	0.46	1.31	0.12	0.22	0.52
43	1.3847E-07	0.0	0.0	0.0	0.09	0.04	0.0	0.15	0.48	1.39	0.12	0.14	0.51
44	1.0698E-07	0.0	0.0	0.0	0.26	0.13	0.0	0.17	0.52	1.13	0.11	0.19	0.48
45	8.2655E-08	0.0	0.0	0.0	0.25	0.33	0.0	0.11	0.37	1.00	0.12	0.13	0.52
46	6.3859E-08	0.0	0.0	0.0	0.40	0.46	0.0	0.16	0.46	1.15	0.10	0.16	0.42
47	4.9338E-08	0.0	0.0	0.0	0.42	0.46	0.0	0.18	0.44	1.28	0.14	0.13	0.42
48	3.8119E-08	0.0	0.0	0.0	0.38	0.48	0.24	0.24	0.60	1.20	0.08	0.26	0.57
49	2.9451E-08	0.0	0.0	0.0	0.22	0.36	0.66	0.14	0.67	1.32	0.08	0.31	0.72
50	2.2754E-08	100.00	100.00	100.00	97.83	97.74	99.10	90.07	84.54	66.12	86.98	79.72	54.82

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3050.00

	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
PER GM OF CO		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	3.4598E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
2	2.5884E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
3	1.9365E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.01	0.0
4	1.4487E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.04	0.0
5	1.0838E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.37	0.0
6	8.1086E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.60	0.0
7	6.0663E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.92	0.91	0.11
8	4.5384E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.89	1.18	0.19
9	3.3953E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95	1.11	0.95
10	2.5402E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	1.11	1.85
11	1.9004E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85	1.08	2.48
12	1.4217E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.96	3.14
13	1.0637E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.97	2.91
14	7.9576E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.64	0.91	2.81
15	5.9534E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.63	0.93	2.67
16	4.4539E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.83	2.62
17	3.3321E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.42	0.84	2.47
18	2.4929E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.39	0.76	2.07
19	1.8650E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.01	0.0	0.40	0.80	2.23
20	1.3953E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.06	0.0	0.41	0.72	2.04
21	1.0439E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.29	0.0	0.35	0.65	1.88
22	7.8054E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.44	0.0	0.34	0.66	1.55
23	5.8425E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.83	0.77	0.13	0.33	0.55	1.59
24	4.3710E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.73	0.95	0.13	0.22	0.63	1.52
25	3.2701E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.97	1.06	0.76	0.27	0.48	1.48
26	2.4465E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.87	1.08	1.40	0.14	0.46	1.11
27	1.8303E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.67	1.03	2.01	0.14	0.56	1.08
28	1.3693E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.67	1.01	2.36	0.14	0.51	1.13
29	1.0244E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.75	1.05	2.92	0.12	0.42	1.11
30	7.6640E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.61	0.77	2.91	0.11	0.34	0.94
31	5.7337F-06	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.83	2.69	0.16	0.35	1.07
32	4.2856E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.56	1.02	2.56	0.19	0.31	1.08
33	3.2092E-06	0.0	0.0	0.0	0.01	0.0	0.0	0.50	0.77	2.53	0.26	0.36	0.92
34	2.4009E-06	0.0	0.0	0.0	0.03	0.0	0.0	0.43	0.76	2.51	0.19	0.44	0.97
35	1.7962E-06	0.0	0.0	0.0	0.11	0.01	0.0	0.35	0.70	2.13	0.22	0.37	0.64
36	1.3438E-06	0.0	0.0	0.0	0.11	0.02	0.0	0.33	0.77	2.12	0.22	0.35	0.72
37	1.0053E-06	0.0	0.0	0.0	0.24	0.11	0.0	0.23	0.69	1.85	0.17	0.27	0.76
38	7.5213E-07	0.0	0.0	0.0	0.37	0.35	0.0	0.22	0.62	1.75	0.16	0.34	0.71
39	5.6269E-07	0.0	0.0	0.0	0.50	0.46	0.07	0.28	0.50	1.61	0.14	0.34	0.69
40	4.2097E-07	0.0	0.0	0.0	0.69	0.71	0.15	0.25	0.55	1.60	0.13	0.21	0.76
41	3.1494E-07	0.0	0.0	0.0	0.79	0.78	0.19	0.22	0.54	1.61	0.15	0.29	0.78
42	2.3562E-07	0.0	0.0	0.0	0.74	0.86	0.81	0.19	0.49	1.21	0.13	0.25	0.78
43	1.7627E-07	0.0	0.0	0.0	0.89	1.18	1.42	0.24	0.44	1.15	0.22	0.25	0.61
44	1.3188E-07	0.0	0.0	0.0	0.75	1.04	1.87	0.21	0.54	1.17	0.21	0.28	0.70
45	9.8662E-08	0.0	0.0	0.0	0.76	1.10	2.11	0.24	0.54	1.15	0.28	0.36	0.61
46	7.3812E-08	0.0	0.0	0.0	0.71	1.12	2.39	0.16	0.50	1.15	0.30	0.33	0.63
47	5.5221E-08	0.0	0.0	0.0	0.64	0.89	2.87	0.19	0.46	1.23	0.26	0.34	0.64
48	4.1314E-08	0.0	0.0	0.0	0.53	1.08	2.86	0.16	0.44	1.27	0.30	0.31	0.69
49	3.0908E-08	0.0	0.0	0.0	0.40	0.92	3.23	0.10	0.39	1.56	0.25	0.25	0.64
50	2.3123E-08	100.00	100.00	100.00	91.73	89.37	82.03	87.17	79.93	54.53	83.03	74.61	43.67

CARBON MONOXIDE--FIRST OVERTONE BAND
 CAPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3150.00

PER GM OF CO	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	6.8718E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.0	0.0
2	5.0702E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.0	0.0
3	3.7410E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.33	0.0
4	2.7602E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93	0.72	0.0
5	2.0366E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.02	1.22	0.0
6	1.5027E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.02	1.53	0.25
7	1.1087E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05	1.28	1.55
8	8.1805E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94	1.36	2.71
9	6.0359E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.96	1.34	3.55
10	4.4535E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	1.14	3.84
11	3.2859E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	1.02	3.33
12	2.4245E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	1.20	3.04
13	1.7689E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55	1.18	2.78
14	1.3199E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.45	0.93	2.67
15	9.7385E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	0.45	0.85	2.49
16	7.1654E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.03	0.0	0.38	0.64	2.33
17	5.3017E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.36	0.0	0.44	0.69	2.35
18	3.9117E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.81	0.68	0.0	0.40	0.46	1.97
19	2.8862E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.88	0.95	0.07	0.32	0.63	1.85
20	2.1296E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.96	1.35	0.21	0.32	0.59	1.72
21	1.5713E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.04	1.32	1.41	0.30	0.60	1.59
22	1.1593E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.83	1.42	2.47	0.19	0.64	1.29
23	8.5539E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.92	1.21	2.94	0.27	0.66	1.28
24	6.3114E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.73	1.14	3.60	0.17	0.52	1.28
25	4.6568E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.68	1.06	3.54	0.27	0.51	1.17
26	3.4359E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.63	1.06	3.17	0.35	0.35	1.07
27	2.5351E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.48	1.17	2.76	0.30	0.48	0.96
28	1.8705E-05	0.0	0.0	0.0	0.06	0.0	0.0	0.57	0.91	2.70	0.47	0.37	0.97
29	1.3801E-05	0.0	0.0	0.0	0.14	0.0	0.0	0.33	0.94	2.57	0.36	0.44	0.92
30	1.0183E-05	0.0	0.0	0.0	0.18	0.01	0.0	0.37	0.80	2.50	0.24	0.42	0.70
31	7.5134E-06	0.0	0.0	0.0	0.41	0.25	0.0	0.18	0.56	2.24	0.30	0.52	0.85
32	5.5436E-06	0.0	0.0	0.0	0.56	0.50	0.0	0.26	0.57	2.01	0.21	0.43	0.78
33	4.0903E-06	0.0	0.0	0.0	0.78	0.76	0.04	0.24	0.53	1.90	0.19	0.34	0.75
34	3.0180E-06	0.0	0.0	0.0	0.79	0.83	0.13	0.26	0.50	1.81	0.12	0.34	0.87
35	2.2268E-06	0.0	0.0	0.0	0.85	1.22	0.84	0.29	0.52	1.56	0.16	0.39	0.71
36	1.6430E-06	0.0	0.0	0.0	0.90	1.23	1.66	0.27	0.51	1.43	0.19	0.29	0.70
37	1.2122E-06	0.0	0.0	0.0	0.96	1.35	2.35	0.28	0.48	1.15	0.12	0.31	0.71
38	8.9444E-07	0.0	0.0	0.0	0.84	1.28	2.76	0.27	0.69	1.38	0.14	0.30	0.60
39	6.5995E-07	0.0	0.0	0.0	0.71	1.15	3.23	0.20	0.59	1.16	0.16	0.30	0.77
40	4.8693E-07	0.0	0.0	0.0	0.67	1.09	3.31	0.16	0.44	1.01	0.11	0.36	0.55
41	3.5927E-07	0.0	0.0	0.0	0.53	1.09	3.14	0.24	0.44	1.00	0.11	0.14	0.50
42	2.6509E-07	0.03	0.0	0.0	0.58	1.01	2.84	0.14	0.34	1.00	0.18	0.24	0.61
43	1.9559E-07	0.11	0.0	0.0	0.50	0.97	2.80	0.19	0.43	0.93	0.16	0.22	0.49
44	1.4431E-07	0.12	0.0	0.0	0.36	0.68	2.68	0.10	0.43	0.81	0.18	0.34	0.58
45	1.0648E-07	0.15	0.09	0.0	0.33	0.82	2.47	0.12	0.37	0.80	0.24	0.29	0.59
46	7.8565E-08	0.26	0.25	0.0	0.28	0.74	2.24	0.14	0.48	0.92	0.23	0.23	0.69
47	5.7967E-08	0.46	0.64	0.0	0.26	0.64	2.16	0.29	0.52	0.89	0.24	0.28	0.53
48	4.2770E-08	0.52	0.59	0.10	0.09	0.50	2.19	0.47	0.59	1.06	0.40	0.36	0.56
49	3.1558E-08	0.37	0.56	0.26	0.15	0.60	2.49	0.52	0.45	1.19	0.39	0.26	0.60
50	2.3284E-08	97.98	97.87	99.64	89.07	83.08	62.67	85.03	76.16	47.71	80.86	71.96	39.90

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3250.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	4.2169E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.9994E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
3	2.1334E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.01	0.0
4	1.5174E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.17	0.0
5	1.0793E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.07	0.71	0.0
6	7.6771E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.27	1.22	0.09
7	5.4606E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.53	1.72	0.51
8	3.8840E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.28	1.96	1.35
9	2.7626E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.17	1.80	2.89
10	1.9650E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.12	1.68	5.17
11	1.3977E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.96	1.61	5.10
12	9.9413E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.79	1.29	4.53
13	7.0711E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	0.60	1.24	3.82
14	5.0295E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.01	0.0	0.78	1.22	3.55
15	3.5774E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.25	0.0	0.60	1.06	3.38
16	2.5445E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.62	0.0	0.59	1.07	2.69
17	1.8099E-03	0.0	0.0	0.0	0.0	0.0	0.0	1.06	1.04	0.08	0.62	0.90	2.46
18	1.2873E-03	0.0	0.0	0.0	0.0	0.0	0.0	1.30	1.31	0.59	0.40	1.01	2.36
19	9.1566E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.32	1.74	1.45	0.40	0.71	2.27
20	6.5129E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.27	1.88	2.22	0.25	0.75	1.95
21	4.6325E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.04	1.68	3.72	0.26	0.79	1.97
22	3.2950E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.91	1.63	4.51	0.37	0.70	1.99
23	2.3437E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.86	1.44	4.79	0.29	0.72	1.57
24	1.6670E-04	0.0	0.0	0.0	0.11	0.0	0.0	0.71	1.19	4.43	0.41	0.57	1.65
25	1.1857E-04	0.0	0.0	0.0	0.14	0.0	0.0	0.58	1.02	3.89	0.39	0.60	1.44
26	8.4338E-05	0.0	0.0	0.0	0.37	0.14	0.0	0.58	1.17	3.24	0.41	0.57	1.25
27	5.9988E-05	0.0	0.0	0.0	0.63	0.53	0.0	0.36	1.04	3.17	0.40	0.63	0.97
28	4.2668E-05	0.0	0.0	0.0	0.81	0.68	0.0	0.45	0.92	2.53	0.35	0.54	1.23
29	3.0349E-05	0.0	0.0	0.0	0.95	0.98	0.31	0.38	0.97	2.50	0.34	0.45	1.24
30	2.1587E-05	0.0	0.0	0.0	1.14	1.29	1.18	0.41	0.76	2.33	0.32	0.46	1.13
31	1.5354E-05	0.0	0.0	0.0	1.11	1.52	1.59	0.33	0.77	1.97	0.38	0.55	0.97
32	1.0921E-05	0.0	0.0	0.0	1.19	1.73	2.50	0.32	0.71	1.87	0.43	0.59	1.08
33	7.7680E-06	0.0	0.0	0.0	1.13	1.72	3.41	0.33	0.69	1.91	0.32	0.67	0.95
34	5.5253E-06	0.0	0.0	0.0	0.85	1.62	3.80	0.29	0.68	1.66	0.44	0.65	0.81
35	3.9300E-06	0.07	0.0	0.0	0.78	1.34	4.59	0.23	0.50	1.80	0.40	0.59	0.90
36	2.7954E-06	0.13	0.0	0.0	0.63	1.21	4.38	0.17	0.65	1.44	0.47	0.58	1.06
37	1.9883E-06	0.18	0.05	0.0	0.61	1.09	4.11	0.20	0.49	1.33	0.40	0.43	1.29
38	1.4142E-06	0.37	0.29	0.0	0.56	1.08	3.48	0.16	0.62	1.17	0.43	0.46	1.22
39	1.0059E-06	0.54	0.53	0.0	0.43	0.96	2.98	0.22	0.40	1.05	0.28	0.41	1.08
40	7.1549E-07	0.74	0.68	0.0	0.33	0.98	2.53	0.26	0.63	1.09	0.36	0.52	1.08
41	5.0891E-07	0.89	0.86	0.70	0.34	0.86	2.47	0.21	0.47	1.23	0.22	0.52	0.82
42	3.6198E-07	1.00	1.29	1.38	0.25	0.81	2.38	0.32	0.51	1.06	0.23	0.55	0.89
43	2.5747E-07	1.04	1.24	1.48	0.23	0.70	1.88	0.36	0.43	1.18	0.22	0.46	0.64
44	1.8313E-07	1.06	1.58	2.43	0.25	0.78	1.89	0.36	0.48	0.93	0.18	0.37	0.65
45	1.3026E-07	1.10	1.76	2.96	0.27	0.66	1.82	0.41	0.36	0.81	0.35	0.45	0.42
46	9.2652E-08	1.06	1.91	3.12	0.31	0.68	1.76	0.33	0.48	0.81	0.38	0.50	0.53
47	6.5901E-08	0.95	1.40	4.13	0.22	0.60	1.89	0.31	0.37	0.68	0.46	0.41	0.55
48	4.6874E-08	0.67	1.44	4.35	0.31	0.62	1.84	0.19	0.47	0.85	0.61	0.40	0.64
49	3.3341E-08	0.55	1.43	4.84	0.40	0.73	1.81	0.28	0.53	1.12	0.51	0.51	1.00
50	2.3715E-08	89.65	85.54	74.61	85.65	76.69	47.40	81.79	71.09	36.59	74.49	64.22	26.86

CARBON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3350.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
PER GM OF CO												
1	1.6635E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.1509E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
3	7.9621E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.01	0.0
4	5.5084E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.02	0.0
5	3.8109E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.04	0.44	0.0
6	2.6365E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.64	1.44	0.10
7	1.8240E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.88	2.00	0.13
8	1.2619E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.77	2.54	1.28
9	8.7303E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.47	2.48	4.36
10	6.0399E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40	1.68	5.02
11	4.1786E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	1.16	1.76	6.55
12	2.8909E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.01	0.0	0.90	1.29
13	2.0000E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.09	0.0	0.70	1.35
14	1.3837E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.92	0.61	0.0	0.67	1.25
15	9.5726E -03	0.0	0.0	0.0	0.0	0.0	0.0	1.29	1.23	0.10	0.44	1.05
16	6.6226E -03	0.0	0.0	0.0	0.0	0.0	0.0	1.48	1.68	0.23	0.58	1.12
17	4.5817E -03	0.0	0.0	0.0	0.0	0.0	0.0	1.64	2.05	1.55	0.33	0.96
18	3.1698E -03	0.0	0.0	0.0	0.0	0.0	0.0	1.61	2.42	3.60	0.39	1.04
19	2.1930E -03	0.0	0.0	0.0	0.0	0.0	0.0	1.39	1.98	4.20	0.22	1.02
20	1.5172E -03	0.0	0.0	0.0	0.07	0.0	0.0	1.19	1.66	5.15	0.35	0.95
21	1.0496E -03	0.0	0.0	0.0	0.14	0.0	0.0	1.04	1.43	5.65	0.32	0.94
22	7.2616E -04	0.0	0.0	0.0	0.36	0.14	0.0	0.79	1.31	5.14	0.37	0.82
23	5.0238E -04	0.0	0.0	0.0	0.77	0.46	0.0	0.58	1.13	4.25	0.43	0.85
24	3.4756E -04	0.0	0.0	0.0	0.93	0.85	0.06	0.44	1.10	3.64	0.48	0.78
25	2.4045E -04	0.0	0.0	0.0	1.17	1.24	0.24	0.30	0.95	3.17	0.47	0.77
26	1.6635E -04	0.0	0.0	0.0	1.25	1.73	1.01	0.30	1.05	2.59	0.55	0.64
27	1.1509E -04	0.0	0.0	0.0	1.51	1.80	2.67	0.31	1.02	2.32	0.51	0.60
28	7.9622E -05	0.0	0.0	0.0	1.53	2.13	3.36	0.24	0.88	2.36	0.53	0.74
29	5.5085E -05	0.06	0.0	0.0	1.36	1.90	3.97	0.35	0.95	2.03	0.52	0.66
30	3.8109E -05	0.12	0.0	0.0	1.19	1.62	4.61	0.25	0.82	1.78	0.59	0.77
31	2.6365E -05	0.24	0.05	0.0	0.95	1.41	5.24	0.27	0.87	1.55	0.67	0.91
32	1.8240E -05	0.52	0.37	0.0	0.68	1.29	4.86	0.18	0.73	1.36	0.59	0.89
33	1.2619E -05	0.71	0.61	0.0	0.64	1.04	4.25	0.26	0.97	1.25	0.62	0.76
34	8.7304E -06	0.89	0.85	0.21	0.37	1.04	3.74	0.18	0.75	1.34	0.76	0.73
35	6.0399E -06	1.03	1.29	0.67	0.30	1.04	3.16	0.31	0.69	1.25	0.55	0.75
36	4.1786E -06	1.12	1.42	1.69	0.20	0.97	2.59	0.28	0.51	1.15	0.59	0.72
37	2.8909E -06	1.25	1.67	2.67	0.21	0.88	2.40	0.30	0.55	1.09	0.40	0.62
38	2.0000E -06	1.24	1.94	3.07	0.17	1.03	2.30	0.31	0.39	0.99	0.40	0.70
39	1.3837E -06	1.43	1.80	3.40	0.21	0.86	1.96	0.31	0.46	0.98	0.38	0.65
40	9.5727E -07	1.26	1.52	4.31	0.30	0.80	1.69	0.33	0.46	0.87	0.35	0.63
41	6.6227E -07	0.91	1.50	4.82	0.15	0.74	1.49	0.35	0.43	0.95	0.39	0.48
42	4.5818E -07	0.79	1.27	4.24	0.28	0.84	1.26	0.37	0.35	0.87	0.45	0.44
43	3.1698E -07	0.50	1.13	4.50	0.22	0.75	1.33	0.31	0.52	0.96	0.44	0.63
44	2.1930E -07	0.43	1.15	3.77	0.15	0.86	1.25	0.40	0.40	0.77	0.66	0.57
45	1.5172E -07	0.35	0.95	3.28	0.20	0.79	1.25	0.42	0.79	0.76	0.40	0.76
46	1.0496E -07	0.22	1.11	2.89	0.25	0.63	1.28	0.34	0.51	0.83	0.99	0.59
47	7.2617E -08	0.20	0.99	2.65	0.19	0.45	1.14	0.30	0.58	0.84	1.85	0.58
48	5.0239E -08	0.22	1.06	2.46	0.23	0.50	1.20	0.33	0.69	0.97	2.49	0.85
49	3.4757E -08	0.14	1.23	2.66	0.19	0.47	1.23	0.37	0.84	0.84	3.54	1.79
50	2.4046E -08	86.27	78.09	52.71	83.83	71.74	40.46	79.23	66.51	32.59	62.86	56.55

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3450.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	3.3040E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
2	2.2544E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.02	0.0
3	1.5382E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.61	0.11	0.0
4	1.0495E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.32	0.70	0.0
5	7.1608E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.81	1.58	0.15
6	4.8859E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.04	2.51	0.53
7	3.3337E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.91	2.55	2.06
8	2.2746E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	1.74	2.35	5.05
9	1.5520E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.02	0.0	1.37	2.36	6.62
10	1.0589E -01	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.07	0.0	1.27	2.13	6.91
11	7.2251E -02	0.0	0.0	0.0	0.0	0.0	0.0	0.94	0.52	0.0	1.13	1.95	5.97
12	4.9297E -02	0.0	0.0	0.0	0.0	0.0	0.0	1.30	1.07	0.09	0.89	1.67	5.33
13	3.3636E -02	0.0	0.0	0.0	0.0	0.0	0.0	1.59	1.67	0.43	0.69	1.37	4.60
14	2.2950E -02	0.0	0.0	0.0	0.0	0.0	0.0	1.69	2.23	1.35	0.61	1.35	3.59
15	1.5659E -02	0.0	0.0	0.0	0.02	0.0	0.0	1.63	2.17	2.96	0.52	1.19	3.23
16	1.0684E -02	0.0	0.0	0.0	0.10	0.02	0.0	1.43	2.27	5.06	0.46	1.13	3.11
17	7.2899E -03	0.0	0.0	0.0	0.26	0.03	0.0	1.23	1.98	5.95	0.46	1.23	2.61
18	4.9739E -03	0.0	0.0	0.0	0.50	0.28	0.0	1.41	1.97	5.90	0.51	0.90	2.05
19	3.3937E -03	0.0	0.0	0.0	0.94	0.68	0.0	0.93	1.95	5.54	0.62	1.04	1.90
20	2.3156E -03	0.0	0.0	0.0	1.14	1.08	0.27	0.67	1.64	5.02	0.61	0.96	1.80
21	1.5799E -03	0.0	0.0	0.0	1.36	1.39	0.75	0.55	1.37	4.23	0.80	0.82	1.78
22	1.0780E -03	0.01	0.0	0.0	1.39	1.85	1.77	0.67	1.29	4.08	0.72	0.91	1.63
23	7.3552E -04	0.07	0.0	0.0	1.48	2.03	2.84	0.48	1.08	3.49	0.74	0.99	1.46
24	5.0185E -04	0.10	0.02	0.0	1.37	1.95	4.32	0.38	1.14	3.07	0.67	0.93	1.24
25	3.4242E -04	0.31	0.10	0.0	1.24	1.94	4.99	0.30	1.09	2.46	0.75	1.07	1.30
26	2.3363E -04	0.52	0.37	0.0	1.16	1.74	5.39	0.42	0.94	2.24	0.67	1.11	1.63
27	1.5541E -04	0.78	0.69	0.07	1.06	1.59	4.77	0.34	1.00	1.82	0.68	1.06	2.08
28	1.0877E -04	0.94	1.02	0.27	0.81	1.82	4.87	0.39	0.85	1.77	0.70	1.09	1.64
29	7.4212E -05	1.12	1.08	1.03	0.67	1.67	4.80	0.37	0.86	1.58	0.88	1.13	1.69
30	5.0635E -05	1.17	1.54	1.88	0.48	1.32	3.72	0.45	0.67	1.64	0.80	1.15	1.31
31	3.4549E -05	1.34	1.67	2.57	0.40	1.15	3.89	0.37	0.63	1.27	0.74	1.09	1.38
32	2.3573E -05	1.25	1.90	3.47	0.36	1.18	3.32	0.37	0.60	1.34	0.65	1.03	1.44
33	1.6084E -05	1.14	1.62	3.59	0.44	1.02	2.86	0.42	0.60	1.16	0.52	0.85	1.23
34	1.0974E -05	1.04	1.78	4.70	0.31	0.97	2.26	0.50	0.58	1.10	0.71	0.86	1.16
35	7.4878E -06	1.02	1.65	4.72	0.22	1.02	1.94	0.46	0.54	1.24	0.54	0.89	1.31
36	5.1089E -06	0.70	1.49	4.50	0.32	0.91	1.91	0.48	0.74	1.11	0.42	0.76	1.16
37	3.4859E -06	0.92	1.46	4.31	0.32	0.82	1.65	0.40	0.66	1.08	0.56	0.70	1.20
38	2.3784E -06	0.72	1.63	4.32	0.26	0.85	1.60	0.51	0.75	1.04	0.57	0.79	0.89
39	1.6228E -06	0.41	1.48	3.77	0.28	0.74	1.41	0.42	0.71	0.83	0.60	0.54	0.66
40	1.1073E -06	0.45	1.20	3.12	0.38	0.56	1.27	0.52	0.79	0.80	0.70	0.58	0.61
41	7.5549E -07	0.31	1.09	3.42	0.37	0.50	1.35	0.54	0.83	0.91	0.74	0.50	0.60
42	5.1548E -07	0.28	1.00	2.79	0.27	0.60	1.13	0.63	0.91	1.12	0.68	0.71	0.57
43	3.5171E -07	0.35	1.01	2.38	0.30	0.51	1.22	0.54	0.90	1.32	0.74	0.70	0.56
44	2.3998E -07	0.32	0.99	1.95	0.27	0.53	1.08	0.62	0.83	1.22	1.25	0.77	0.62
45	1.6374E -07	0.27	0.94	1.81	0.26	0.51	1.08	0.58	0.80	1.19	2.29	0.93	0.61
46	1.1172E -07	0.21	0.78	1.57	0.28	0.57	1.01	0.69	0.99	1.00	4.35	1.69	0.49
47	7.6228E -08	0.37	0.92	1.68	0.31	0.62	1.01	0.61	0.91	0.92	5.81	3.04	0.52
48	5.2011E -08	0.30	0.80	1.65	0.49	0.61	0.96	0.93	0.97	0.96	6.27	4.54	0.50
49	3.5487E -08	0.29	0.72	1.89	0.40	0.76	1.02	1.16	1.03	1.22	7.42	6.27	0.60
50	2.4213E -08	83.29	71.05	38.14	79.78	66.18	29.54	71.47	57.38	20.49	38.33	35.40	12.62

CARECN MCNCXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3550.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	9.8039E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
2	6.5439E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.03	0.0
3	4.3679E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.10	0.0
4	2.9155E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.37	0.83	0.08
5	1.9460E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.83	1.82	0.20
6	1.2989E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	1.77	2.60	0.72
7	8.6700E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.02	0.0	1.69	2.37	3.51
8	5.7871E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.06	0.0	1.69	2.52	5.65
9	3.8627E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.77	0.28	0.0	1.54	2.10	7.15
10	2.5783E-01	0.0	0.0	0.0	0.0	0.0	0.0	1.13	0.96	0.13	1.53	2.10	5.92
11	1.7210E-01	0.0	0.0	0.0	0.01	0.0	0.0	1.43	1.63	0.27	1.35	2.33	5.42
12	1.1487E-01	0.0	0.0	0.0	0.04	0.0	0.0	1.58	2.13	1.21	1.26	2.00	4.75
13	7.6673E-02	0.0	0.0	0.0	0.10	0.03	0.0	1.47	2.06	3.32	1.40	2.00	4.74
14	5.1178E-02	0.0	0.0	0.0	0.30	0.13	0.0	1.53	2.18	4.46	1.21	1.88	4.63
15	3.4160E-02	0.0	0.0	0.0	0.59	0.31	0.05	1.35	1.94	6.25	1.24	1.86	3.99
16	2.2801E-02	0.0	0.0	0.0	0.90	0.70	0.13	1.05	2.08	5.96	1.07	1.89	3.54
17	1.5219E-02	0.02	0.0	0.0	1.22	1.39	0.32	1.06	1.74	5.16	1.15	1.74	3.60
18	1.0159E-02	0.05	0.0	0.0	1.36	1.57	1.22	0.88	1.74	4.66	1.06	1.71	3.71
19	6.7806E-03	0.08	0.03	0.0	1.40	1.92	2.26	1.21	1.68	4.49	1.18	1.85	3.08
20	4.5259E-03	0.29	0.14	0.0	1.19	1.92	4.14	0.96	1.80	3.64	1.22	1.80	2.56
21	3.0209E-03	0.42	0.25	0.02	1.35	2.06	4.34	0.88	1.68	3.58	1.17	1.96	2.85
22	2.0164E-03	0.72	0.62	0.15	1.01	1.66	5.55	1.07	1.53	3.51	1.25	1.72	2.48
23	1.3459E-03	0.93	0.99	0.33	1.09	1.90	5.55	0.88	1.29	3.45	1.04	1.57	2.30
24	8.9836E-04	1.11	1.22	1.08	0.85	1.73	4.84	0.76	1.44	3.08	1.28	1.39	1.96
25	5.9964E-04	1.17	1.50	1.28	0.73	1.35	3.98	0.77	1.45	2.87	1.09	1.64	1.69
26	4.0025E-04	1.30	1.77	2.82	0.82	1.45	4.13	0.80	1.31	2.39	1.09	1.44	1.72
27	2.6716E-04	1.14	1.78	3.87	0.71	1.33	3.69	0.62	1.33	2.54	1.08	1.27	1.64
28	1.7832E-04	0.91	1.78	4.01	0.96	1.38	2.61	0.61	1.48	2.38	1.08	1.34	1.27
29	1.1902E-04	1.02	1.57	5.26	0.59	1.75	2.93	0.79	1.29	2.43	0.96	1.32	1.18
30	7.9447E-05	0.81	1.60	4.74	0.89	1.41	3.21	0.86	1.31	2.12	0.85	1.30	1.29
31	5.3029E-05	0.90	1.45	4.51	0.79	1.25	2.99	0.75	1.30	1.92	0.86	1.07	1.22
32	3.5396E-05	0.70	1.54	4.11	0.74	1.26	2.83	0.73	1.29	1.68	0.57	0.93	1.12
33	2.3626E-05	0.65	1.30	3.48	0.66	1.21	2.60	0.96	1.15	1.54	0.54	0.96	0.92
34	1.5770E-05	0.64	1.18	3.42	0.59	1.01	2.36	0.87	1.26	1.30	0.61	0.79	0.75
35	1.0526E-05	0.55	1.39	3.01	0.61	1.18	2.12	0.74	1.26	1.29	0.67	0.86	0.64
36	7.0258E-06	0.59	1.24	2.59	0.53	1.21	1.90	0.93	1.18	1.15	0.74	0.75	0.73
37	4.6896E-06	0.79	1.22	2.38	0.58	1.12	1.84	0.96	1.19	1.29	0.62	0.64	0.67
38	3.1302E-06	0.66	1.42	2.94	0.40	1.12	1.98	0.80	1.09	1.23	0.68	0.77	0.54
39	2.0893E-06	0.66	1.31	2.63	0.52	0.97	1.72	0.88	1.03	1.22	0.68	0.86	0.61
40	1.3946E-06	0.71	1.10	2.28	0.49	1.06	1.41	0.91	0.97	0.99	0.87	0.68	0.43
41	9.3086E-07	0.68	1.28	2.65	0.50	1.03	1.37	0.77	0.92	1.06	1.11	0.70	0.33
42	6.2133E-07	0.63	1.06	2.16	0.69	1.06	1.21	0.88	0.94	0.94	1.87	0.83	0.47
43	4.1472E-07	0.53	0.95	1.92	0.65	1.06	1.33	0.92	0.97	0.90	2.80	0.92	0.34
44	2.7682E-07	0.39	1.17	2.03	0.59	0.99	1.28	0.92	0.98	0.97	3.88	1.78	0.32
45	1.8477E-07	0.43	0.97	1.82	0.83	0.97	1.10	0.92	1.21	0.99	5.08	3.11	0.41
46	1.2333E-07	0.49	0.92	1.57	0.64	1.06	1.14	1.35	1.06	0.74	6.30	4.53	0.57
47	8.2321E-08	0.45	1.09	1.58	0.65	0.93	1.08	1.72	1.31	0.69	7.50	5.34	0.47
48	5.4947E-08	0.41	1.02	1.40	0.74	0.93	0.93	2.62	1.24	0.52	7.92	6.66	0.41
49	3.6667E-08	0.41	1.10	1.52	0.82	1.06	1.09	3.40	1.72	0.70	7.77	6.89	1.47
50	2.4480E-08	78.76	64.04	27.84	71.87	55.53	18.77	55.11	43.52	10.98	13.65	12.45	5.95

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3650.00

MID-POINT ABSORP COEFF	PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.6256E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.0	0.0
2	1.0741E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.89	0.20	0.0
3	7.0962E-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.57	1.12	0.0
4	4.6684E-00	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	1.82	2.26	0.07
5	3.0576E-00	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	1.82	2.64	1.44
6	2.0466E-00	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.13	0.0	1.84	2.39	5.23
7	1.3522E-00	0.0	0.0	0.0	0.0	0.0	0.0	0.99	0.71	0.0	1.65	2.53	6.44
8	8.9336E-01	0.0	0.0	0.0	0.01	0.0	0.0	1.42	1.40	0.0	1.53	2.13	7.07
9	5.9024E-01	0.0	0.0	0.0	0.11	0.0	0.0	1.53	1.99	0.53	1.73	2.42	5.92
10	3.8997E-01	0.0	0.0	0.0	0.31	0.03	0.0	1.63	2.34	3.17	2.34	2.41	5.44
11	2.5765E-01	0.0	0.0	0.0	0.63	0.39	0.0	1.41	2.12	4.70	2.02	3.18	5.10
12	1.7023E-01	0.0	0.0	0.0	0.90	0.76	0.0	1.33	2.27	6.12	2.17	3.17	5.82
13	1.1247E-01	0.07	0.0	0.0	1.13	1.22	0.15	1.04	1.88	5.91	2.17	3.03	6.03
14	7.4307E-02	0.14	0.0	0.0	1.34	1.79	1.42	1.07	1.67	5.36	1.73	2.92	6.22
15	4.9094E-02	0.33	0.15	0.0	1.42	1.98	2.30	1.08	1.59	4.79	1.89	2.80	5.54
16	3.2436E-02	0.56	0.44	0.0	1.40	2.05	3.94	1.17	1.68	4.55	1.71	2.60	4.58
17	2.1430E-02	0.82	0.69	0.0	1.07	1.72	5.55	1.49	2.01	3.88	1.54	2.71	3.39
18	1.4159E-02	0.95	1.18	0.57	0.96	1.77	5.22	1.58	2.43	3.75	1.60	2.27	3.09
19	9.3547E-03	0.98	1.39	1.50	0.93	1.90	5.05	1.54	2.38	4.37	1.36	2.12	2.84
20	6.1806E-03	1.38	1.67	2.58	0.61	1.38	4.48	1.45	2.47	3.93	1.33	2.25	2.06
21	4.0835E-03	1.05	1.79	3.20	0.72	1.28	3.84	1.48	2.41	4.88	1.20	2.00	1.93
22	2.6979E-03	1.17	1.62	4.43	0.83	1.46	4.35	1.33	1.97	4.44	1.22	1.74	1.78
23	1.7825E-03	0.97	1.82	5.05	0.98	1.57	3.41	1.36	2.20	3.94	1.47	1.42	1.41
24	1.1777E-03	0.71	1.49	4.72	0.97	1.78	3.20	1.30	2.10	3.22	1.36	1.65	1.29
25	7.7809E-04	0.75	1.60	4.13	1.16	1.68	3.26	1.13	1.86	3.04	1.24	1.31	1.17
26	5.1408E-04	0.64	1.28	3.85	1.36	2.00	3.08	1.15	1.84	2.13	1.29	1.29	1.18
27	3.3965E-04	0.54	1.25	3.43	1.28	2.02	3.54	1.26	1.95	2.18	1.12	1.20	1.27
28	2.2440E-04	0.64	1.40	3.89	1.06	2.05	3.19	1.12	1.72	1.62	0.94	1.35	1.09
29	1.4826E-04	0.68	1.41	3.64	1.17	1.64	3.30	0.95	1.63	1.64	1.00	1.18	1.00
30	9.7956E-05	0.54	1.26	2.71	1.03	1.79	3.76	0.99	1.60	1.84	0.81	1.16	0.80
31	6.4719E-05	0.89	1.53	2.84	1.03	1.63	2.84	0.82	1.52	1.43	0.77	1.05	0.83
32	4.2760E-05	0.88	1.59	2.80	0.91	1.64	2.87	1.09	1.55	1.24	0.89	0.97	0.73
33	2.8251E-05	1.08	1.50	2.28	1.03	1.61	2.39	0.97	1.36	1.12	0.89	0.99	0.54
34	1.8665E-05	1.06	1.51	2.83	1.09	1.69	2.06	1.01	1.29	0.94	0.78	0.74	0.49
35	1.2332E-05	1.05	1.62	3.05	0.81	1.59	1.70	1.16	1.18	1.10	0.70	0.70	0.44
36	8.1477E-06	0.90	1.71	2.59	0.80	1.33	1.65	1.11	1.11	0.95	0.76	0.69	0.49
37	5.3831E-06	0.83	1.56	2.30	0.96	1.36	1.53	1.20	1.07	0.83	0.77	0.76	0.35
38	3.5566E-06	0.94	1.25	2.75	0.97	1.63	1.36	0.95	1.14	0.73	1.01	0.58	0.33
39	2.3498E-06	0.84	1.36	2.89	0.97	1.39	1.28	0.88	0.96	0.73	1.32	0.66	0.38
40	1.5525E-06	0.84	1.57	2.54	0.57	1.28	1.22	0.85	0.92	0.89	2.00	0.92	0.44
41	1.0257E-06	0.70	1.36	1.98	0.73	1.31	1.06	1.06	1.04	0.89	2.59	1.17	0.38
42	6.7769E-07	0.74	1.37	1.96	0.80	1.26	1.10	1.21	1.06	0.64	4.23	1.97	0.37
43	4.4775E-07	0.84	1.33	1.72	0.92	1.22	1.04	1.60	1.02	0.50	4.95	2.97	0.32
44	2.9582E-07	0.92	1.51	1.24	0.92	1.16	1.04	2.14	1.22	0.42	6.37	3.96	0.31
45	1.9545E-07	0.73	1.37	1.28	1.07	1.15	0.63	2.88	1.44	0.42	6.03	4.15	0.30
46	1.2913E-07	0.79	1.53	1.13	1.52	1.17	0.78	3.89	2.04	0.48	7.26	6.16	0.77
47	8.5318E-08	0.73	1.24	1.23	1.57	1.19	0.86	4.89	2.61	0.50	7.14	5.80	1.11
48	5.6369E-08	0.96	1.22	1.41	2.20	1.20	0.75	5.93	3.96	0.49	3.52	2.99	0.61
49	3.7242E-08	1.03	1.23	1.54	3.20	1.55	0.83	6.68	4.78	0.63	3.00	2.89	1.24
50	2.4606E-08	70.23	52.20	15.94	56.55	41.38	9.45	28.09	22.38	5.08	0.43	0.43	0.37

CARBON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3750.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP ≈ 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.8236E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0
2 3.1177E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.11	0.0
3 2.0151E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	1.48	1.04	0.0
4 1.3024E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.0	0.0	1.87	2.26	0.10
5 8.4180E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.65	0.16	0.0	1.55	2.19	1.61
6 5.4408E 00	0.0	0.0	0.0	0.03	0.0	0.0	1.10	0.82	0.0	1.54	2.36	4.95
7 3.5166E 00	0.0	0.0	0.0	0.18	0.0	0.0	1.41	1.58	0.25	1.56	2.01	6.43
8 2.2729E 00	0.0	0.0	0.0	0.42	0.13	0.0	1.56	2.12	1.00	1.82	2.39	5.63
9 1.4691E 00	0.02	0.0	0.0	0.72	0.57	0.0	1.32	2.00	3.75	2.10	2.60	5.59
10 9.4950E-01	0.10	0.0	0.0	0.96	0.97	0.25	1.27	2.03	4.84	2.32	2.92	5.40
11 6.1370E-01	0.31	0.08	0.0	1.29	1.53	0.62	1.01	1.80	6.10	2.08	3.15	5.48
12 3.9665E-01	0.49	0.34	0.0	1.30	1.79	2.04	0.98	1.59	4.78	2.11	3.33	6.04
13 2.5637E-01	0.70	0.71	0.15	1.24	1.96	3.87	1.02	1.49	4.91	1.87	2.85	5.83
14 1.6570E-01	0.82	0.97	0.42	1.04	1.77	4.37	1.27	1.91	3.63	1.69	2.64	5.63
15 1.0710E-01	1.15	1.40	1.11	0.89	1.76	5.38	1.57	1.96	4.19	1.67	2.54	4.26
16 6.9222E-02	1.15	1.54	2.58	0.71	1.27	4.90	1.59	2.52	3.64	1.49	2.32	4.57
17 4.4741E-02	1.03	1.81	3.44	0.70	1.23	3.77	1.53	2.48	4.08	1.37	2.18	4.04
18 2.8917E-02	0.95	1.76	3.88	0.72	1.37	3.87	1.59	2.36	4.52	1.29	2.07	3.50
19 1.8690E-02	0.82	1.28	4.58	0.96	1.36	2.96	1.31	2.18	5.03	1.48	2.09	2.85
20 1.2080E-02	0.76	1.55	5.12	0.94	1.74	3.43	1.39	2.20	4.24	1.30	2.03	2.94
21 7.8079E-03	0.63	1.23	3.33	1.09	1.69	3.06	1.33	1.80	3.89	1.41	1.74	2.32
22 5.0465E-03	0.59	0.92	3.10	1.38	1.92	2.83	1.06	2.02	3.22	1.44	1.58	2.41
23 3.2617E-03	0.45	1.31	3.64	1.21	2.05	3.49	1.16	1.93	3.18	1.21	1.62	1.81
24 2.1082E-03	0.68	1.30	2.68	1.17	1.82	3.95	1.21	1.75	2.92	1.18	1.65	1.50
25 1.3626E-03	0.77	1.08	2.36	1.09	1.77	3.57	1.02	1.70	2.95	1.14	1.62	1.73
26 8.8069E-04	0.82	1.47	3.12	1.01	1.81	4.55	0.77	1.47	2.27	0.96	1.30	1.47
27 5.6622E-04	1.02	1.79	2.62	0.99	1.63	2.92	0.98	1.67	2.22	1.10	1.36	1.20
28 3.6791E-04	0.92	1.39	2.51	0.99	1.77	3.08	0.92	1.47	1.69	1.00	1.17	0.94
29 2.3779E-04	1.10	1.56	3.23	0.98	1.54	2.93	1.12	1.50	1.80	1.24	1.28	1.10
30 1.53369E-04	0.95	1.65	3.13	1.05	1.49	2.45	1.11	1.49	1.75	1.20	1.09	0.91
31 9.9337E-05	0.91	1.62	2.83	0.94	1.39	2.13	1.33	1.34	1.36	1.13	1.15	1.11
32 6.4205E-05	0.72	1.55	3.94	0.83	1.45	1.98	1.02	1.32	1.64	0.76	0.94	0.77
33 4.1498E-05	0.88	1.28	3.60	0.85	1.65	1.98	1.03	1.12	1.37	0.69	0.86	0.58
34 2.6822E-05	0.77	1.48	2.65	0.75	1.31	1.93	0.83	1.15	1.10	0.56	1.00	0.63
35 1.7336E-05	0.84	1.40	2.20	0.68	1.20	1.56	0.81	1.16	0.94	0.60	0.77	0.63
36 1.1205E-05	0.85	1.38	2.09	0.68	1.33	1.46	0.81	1.25	0.92	0.81	0.68	0.41
37 7.2420E-06	0.90	1.29	2.07	0.82	1.24	1.22	0.89	1.15	0.81	0.82	0.91	0.45
38 4.6807E-06	0.77	1.43	1.82	0.79	1.20	1.14	1.06	1.08	0.93	1.57	0.85	0.34
39 3.0253E-06	0.85	1.10	1.68	0.92	1.07	1.33	1.29	1.20	0.75	2.62	1.36	0.38
40 1.9554E-06	0.74	1.37	1.50	1.16	1.11	1.07	1.67	1.27	0.81	3.67	1.61	0.25
41 1.2638E-06	0.69	1.25	1.38	1.20	1.26	1.18	2.13	1.36	0.67	5.05	3.08	0.27
42 8.1686E-07	0.79	1.23	1.21	1.35	1.12	1.08	2.83	1.63	0.77	6.93	4.82	0.30
43 5.2796E-07	0.63	1.04	1.43	1.60	1.17	1.09	3.79	2.18	0.76	9.16	6.61	0.44
44 3.4124E-07	0.78	1.23	1.35	1.91	1.30	0.91	5.06	3.24	0.67	7.84	6.03	1.03
45 2.2056E-07	1.01	1.09	1.01	2.66	1.65	0.84	6.57	4.36	0.58	7.19	5.79	0.86
46 1.4255E-07	1.56	1.09	1.06	3.53	2.22	0.76	8.02	6.16	0.70	5.42	4.70	0.87
47 9.2138E-08	1.90	1.25	0.90	4.46	2.96	0.66	9.26	7.05	0.99	1.43	1.03	0.38
48 5.9552E-08	2.30	1.65	1.02	5.87	4.26	0.87	7.61	6.02	1.19	0.37	0.32	0.06
49 3.8490E-08	3.24	2.30	1.14	7.10	5.65	1.13	6.97	5.35	0.95	0.0	0.0	0.0
50 2.4878E-08	62.64	48.83	14.12	38.84	30.52	7.39	5.56	4.61	1.24	0.0	0.0	0.0

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3850.00

PER GM OF CO	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.1949E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0
2	7.5829E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.75	0.07	0.0
3	4.8121E 01	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.0	0.0	1.48	0.97	0.0
4	3.0538E 01	0.0	0.0	0.0	0.04	0.0	0.0	0.65	0.17	0.0	1.52	1.99	0.0
5	1.9379E 01	0.0	0.0	0.0	0.21	0.0	0.0	1.14	0.92	0.0	1.58	2.34	1.73
6	1.2298E 01	0.04	0.0	0.0	0.43	0.23	0.0	1.39	1.68	0.04	1.50	2.17	4.67
7	7.8043E 00	0.15	0.0	0.0	0.92	0.64	0.0	1.30	1.83	1.84	1.59	2.16	6.20
8	4.9526E 00	0.38	0.15	0.0	1.10	1.15	0.06	1.23	2.19	3.63	2.31	2.77	6.35
9	3.1429E 00	0.60	0.48	0.0	1.12	1.65	1.40	1.09	1.58	5.19	2.63	3.23	5.75
10	1.9945E 00	0.87	0.93	0.0	1.01	1.62	2.79	0.99	1.71	5.36	2.49	3.47	6.22
11	1.2657E 00	0.85	1.11	0.94	1.01	1.82	3.57	0.95	1.77	5.47	2.01	3.20	7.22
12	8.0321E-01	1.03	1.50	2.12	0.93	1.55	5.06	1.42	1.77	4.19	2.18	3.07	6.37
13	5.0971E-01	0.86	1.51	3.01	0.79	1.31	4.51	1.75	2.28	4.80	1.77	3.04	6.41
14	3.2346E-01	1.00	1.41	3.18	0.79	1.51	4.80	1.85	2.45	4.28	1.67	2.90	5.31
15	2.0527E-01	0.78	1.57	4.56	0.76	1.39	3.98	1.67	2.67	4.41	1.60	2.57	4.47
16	1.3026E-01	0.73	1.28	4.27	0.74	1.47	3.64	1.58	2.67	5.70	1.41	2.29	4.38
17	8.2665E-02	0.57	1.10	3.81	1.13	1.52	3.94	1.36	2.53	5.22	1.36	2.20	4.17
18	5.2459E-02	0.63	1.28	4.14	1.54	1.85	3.50	1.52	2.41	4.80	1.48	2.46	3.20
19	3.3291E-02	0.63	1.46	3.27	1.31	2.28	3.82	1.39	2.17	4.56	1.40	1.86	2.89
20	2.1126E-02	0.60	1.13	3.00	1.27	2.27	3.61	1.24	2.02	4.00	1.66	1.83	2.13
21	1.3407E-02	0.72	1.46	3.67	1.20	1.97	4.07	1.17	2.02	3.03	1.48	1.93	1.84
22	8.5078E-03	1.05	1.39	3.19	1.23	2.32	5.16	1.21	2.09	2.81	1.13	1.49	1.99
23	5.3990E-03	1.01	1.53	3.26	1.05	1.98	4.06	0.99	1.73	2.63	1.05	1.43	1.64
24	3.4262E-03	1.20	1.97	3.09	1.22	1.58	3.28	1.02	1.49	2.66	1.12	1.28	1.39
25	2.1743E-03	1.11	2.01	3.24	1.04	1.85	3.41	0.88	1.65	2.54	1.09	1.27	1.22
26	1.3798E-03	0.77	1.77	3.39	0.98	1.81	2.81	1.23	1.61	1.73	1.16	1.40	1.15
27	8.7561E-04	0.98	1.57	4.32	1.04	1.67	2.62	1.08	1.41	1.65	1.26	1.28	1.13
28	5.5566E-04	1.01	1.72	3.36	0.94	1.74	2.19	1.15	1.38	1.22	1.18	1.15	0.94
29	3.5262E-04	0.96	1.67	3.09	0.80	1.38	2.28	1.20	1.44	1.33	1.07	1.04	0.86
30	2.2377E-04	0.85	1.47	2.55	0.86	1.27	1.69	1.09	1.22	1.29	0.75	0.79	0.71
31	1.4201E-04	0.96	1.67	2.49	0.92	1.45	1.59	0.83	1.18	1.02	0.84	0.77	0.63
32	9.0117E-05	0.83	1.65	2.91	0.72	1.35	1.77	0.89	1.21	1.08	0.75	0.80	0.68
33	5.7188E-05	0.84	1.24	1.97	0.73	1.18	1.46	0.88	1.27	1.09	0.76	0.91	0.59
34	3.6291E-05	0.72	1.33	1.87	0.91	1.14	1.38	0.84	1.11	0.92	0.80	1.00	0.53
35	2.3030E-05	0.81	1.20	1.39	1.01	1.39	1.15	0.97	1.05	0.88	0.83	1.10	0.46
36	1.4615E-05	0.79	1.14	1.54	1.06	1.15	1.06	1.21	1.03	0.86	1.24	1.01	0.46
37	9.2747E-06	0.79	1.23	1.58	0.97	1.27	0.84	1.42	1.03	0.78	1.76	1.02	0.32
38	5.8857E-06	0.82	1.19	1.22	1.29	1.19	0.83	1.90	1.17	0.72	3.00	1.37	0.35
39	3.7351E-06	0.95	1.19	1.27	1.14	1.09	0.95	2.52	1.34	0.58	4.41	2.32	0.42
40	2.3703E-06	0.96	1.23	1.12	2.02	1.32	0.95	3.23	1.86	0.56	6.55	4.43	0.34
41	1.5042E-06	1.12	1.21	0.68	2.70	1.37	0.77	5.13	3.15	0.51	8.46	5.65	0.39
42	9.5454E-07	1.63	1.35	1.00	3.35	1.92	0.85	6.64	4.52	0.57	9.26	7.08	0.74
43	6.0575E-07	2.63	1.55	1.10	4.82	3.14	0.89	7.79	5.81	0.54	8.92	7.18	1.20
44	3.8441E-07	3.33	1.84	1.01	5.81	4.36	0.87	9.20	7.32	0.79	6.69	5.79	1.65
45	2.4395E-07	4.34	2.91	1.05	7.87	5.81	0.87	8.70	6.58	1.23	1.99	1.92	0.90
46	1.5481E-07	5.39	3.93	0.77	8.92	6.91	1.26	8.84	7.25	1.93	0.0	0.0	0.0
47	9.8242E-08	6.60	5.26	0.94	9.32	7.42	1.48	4.56	3.63	1.53	0.0	0.0	0.0
48	6.2343E-08	8.56	6.63	1.46	8.54	6.92	1.56	0.68	0.63	0.03	0.0	0.0	0.0
49	3.9563E-08	9.12	7.33	1.57	7.73	6.08	1.72	0.0	0.0	0.0	0.0	0.0	0.0
50	2.5107E-08	29.43	23.45	7.40	4.71	3.71	1.48	0.0	0.0	0.0	0.0	0.0	0.0

CARBON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 3950.00

MID-POINT ABSORP COEFF	PER GM CF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	2.3733E 02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0
2	1.4854E 02	0.0	0.0	0.0	0.01	0.0	0.0	0.15	0.0	0.0	0.70	0.08	0.0
3	9.2964E 01	0.02	0.0	0.0	0.18	0.0	0.0	0.68	0.19	0.0	1.27	0.96	0.0
4	5.8183E 01	0.13	0.0	0.0	0.54	0.15	0.0	1.13	0.89	0.0	1.49	2.03	0.14
5	3.6414E 01	0.39	0.09	0.0	0.79	0.66	0.0	1.26	1.47	0.14	1.55	2.02	1.40
6	2.2790E 01	0.59	0.50	0.0	0.97	1.24	0.0	1.17	2.03	1.56	2.23	2.13	5.39
7	1.4264E 01	0.75	0.88	0.0	1.12	1.43	1.26	1.12	1.69	3.97	2.30	3.22	6.09
8	8.9270E 00	0.88	1.18	1.01	0.96	1.81	2.85	1.08	1.53	5.80	2.66	3.60	6.17
9	5.5871E 00	1.03	1.20	1.86	0.92	1.24	4.24	1.29	1.70	4.71	2.14	3.31	6.55
10	3.4567E 00	0.79	1.61	3.21	0.81	1.45	5.04	1.66	1.83	4.29	2.00	2.88	8.14
11	2.1685E 00	0.71	1.15	3.75	0.81	1.28	4.14	1.64	2.89	3.86	1.64	3.15	7.93
12	1.3697E 00	0.72	1.19	4.19	0.77	1.43	3.19	1.79	2.80	4.60	1.73	2.72	6.29
13	8.5723E-01	0.61	1.14	3.91	1.05	1.48	3.78	1.82	2.63	5.94	1.60	2.65	4.53
14	5.3651E-01	0.61	1.20	3.21	1.43	1.65	3.16	1.18	2.53	6.46	1.61	2.43	4.22
15	3.3578E-01	0.66	1.26	2.95	1.20	2.19	3.74	1.18	2.07	5.69	1.41	2.24	4.16
16	2.1015E-01	0.74	1.54	3.12	1.33	2.45	3.62	1.17	2.09	5.13	1.35	2.00	3.63
17	1.3153E-01	0.80	1.38	2.53	1.28	2.28	4.89	1.13	2.01	3.76	1.35	1.93	2.97
18	8.2317E-02	1.08	1.61	3.24	1.17	1.86	5.52	1.27	1.87	3.16	1.35	1.63	2.69
19	5.1519E-02	1.16	1.85	3.58	0.96	2.04	4.08	1.11	1.81	2.74	1.26	1.44	2.60
20	3.2244E-02	1.08	1.99	3.02	0.90	1.77	4.36	1.10	1.77	2.66	1.30	1.60	2.27
21	2.0180E-02	0.83	1.61	3.63	0.85	1.40	3.94	1.04	1.47	2.74	1.17	1.73	2.15
22	1.2630E-02	1.06	1.87	4.24	0.87	1.36	2.81	0.97	1.42	2.49	1.32	1.77	2.03
23	7.9046E-03	0.95	1.70	4.20	0.94	1.31	2.41	1.09	1.37	2.34	1.36	1.64	1.68
24	4.9472E-03	0.74	1.63	3.42	0.81	1.41	2.00	1.10	1.29	2.08	1.07	1.70	1.72
25	3.0963E-03	0.74	1.31	3.20	1.07	1.43	2.03	1.08	1.33	1.76	1.21	1.53	1.45
26	1.9378E-03	0.69	1.15	3.07	0.76	1.49	2.04	0.88	1.43	1.69	1.33	1.50	1.44
27	1.2128E-03	0.69	1.03	2.54	0.83	1.31	2.10	0.96	1.46	1.48	1.29	1.17	1.18
28	7.5906E-04	0.77	1.12	2.06	0.87	1.19	2.10	0.91	1.48	1.63	0.94	1.27	0.97
29	4.7506E-04	0.66	1.24	1.80	0.90	1.20	1.76	0.92	1.58	1.44	1.04	1.19	0.71
30	2.9732E-04	0.64	1.24	1.61	0.78	1.41	1.44	1.07	1.38	1.33	0.87	0.93	0.72
31	1.8608E-04	0.90	1.29	1.52	0.92	1.32	1.67	0.97	1.33	1.22	0.71	0.91	0.91
32	1.1646E-04	0.81	1.21	1.55	0.90	1.36	1.31	1.15	1.15	1.16	0.79	0.96	0.72
33	7.2890E-05	0.74	1.17	1.62	0.86	1.21	1.33	0.99	1.39	1.07	0.61	0.98	0.71
34	4.5619E-05	0.73	1.47	1.62	0.98	1.40	1.20	1.15	1.15	1.05	0.64	0.88	0.60
35	2.8551E-05	0.76	1.22	1.66	0.97	1.03	0.98	1.48	1.23	0.92	1.08	0.82	0.62
36	1.7869E-05	1.01	1.17	1.45	1.48	1.00	1.16	2.02	1.32	0.90	1.83	0.87	0.48
37	1.1184E-05	1.51	1.12	1.10	1.85	1.30	1.13	2.65	1.44	0.67	3.44	1.22	0.46
38	6.9993E-06	2.09	1.40	1.11	2.54	1.73	1.00	3.81	2.13	0.73	5.53	2.66	0.46
39	4.3806E-06	2.48	1.53	1.04	3.99	2.39	1.00	5.04	3.34	0.70	7.00	4.19	0.37
40	2.7417E-06	3.18	2.02	1.13	4.67	3.40	1.06	6.12	4.17	0.64	8.29	6.13	0.58
41	1.7159E-06	4.22	2.85	1.10	6.06	4.55	0.96	7.91	5.42	0.71	9.93	8.44	0.73
42	1.0739E-06	5.58	4.42	1.00	6.61	4.91	0.98	8.64	6.63	1.07	8.07	6.60	0.64
43	6.7212E-07	5.89	4.76	1.08	9.35	6.95	1.44	9.34	7.36	0.85	6.70	6.33	1.95
44	4.2066E-07	7.95	6.15	1.73	8.66	6.65	1.03	9.09	7.90	2.23	2.76	2.56	1.53
45	2.6327E-07	8.15	6.58	1.66	10.52	8.31	1.93	4.96	4.54	1.89	0.0	0.0	0.0
46	1.6477E-07	10.69	8.55	2.16	7.53	6.97	2.83	1.73	1.49	0.71	0.0	0.0	0.0
47	1.0312E-07	9.31	7.31	2.45	4.61	3.90	1.91	0.0	0.0	0.0	0.0	0.0	0.0
48	6.4542E-08	6.85	6.31	2.26	1.62	1.50	0.55	0.0	0.0	0.0	0.0	0.0	0.0
49	4.0394E-08	4.90	4.20	2.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.5281E-08	1.73	1.60	0.98	0.0	0.0	0.03	0.0	0.0	0.03	0.0	0.0	0.02

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4050.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S
1 3.1553E 02	0.10	0.0	0.0	0.13	0.0	0.0	0.14	0.0	0.0	0.11	0.0	0.0
2 1.9635E 02	0.26	0.01	0.0	0.55	0.05	0.0	0.77	0.15	0.0	1.01	0.07	0.0
3 1.2218E 02	0.58	0.39	0.0	0.81	0.62	0.0	1.15	1.13	0.0	1.37	1.50	0.0
4 7.6030E 01	0.76	0.62	0.0	0.90	1.28	0.0	1.07	1.48	0.11	1.85	1.90	0.21
5 4.7311E 01	0.72	1.28	0.38	0.88	1.36	0.99	1.05	1.64	1.42	2.47	2.62	2.38
6 2.9440E 01	0.71	1.19	1.79	0.81	1.28	2.52	1.23	1.47	5.06	2.66	3.82	6.58
7 1.8320E 01	0.75	1.03	2.68	0.82	1.17	4.77	1.68	1.82	4.67	2.20	3.37	6.53
8 1.1400E 01	0.72	1.32	4.21	0.89	1.38	3.47	1.87	2.51	4.46	1.96	3.08	9.10
9 7.0939E 00	0.59	0.93	3.10	1.11	1.41	4.15	1.80	2.91	4.55	1.82	2.78	8.56
10 4.4143E 00	0.70	1.08	3.30	1.29	1.92	3.47	1.62	2.78	6.17	1.79	2.76	6.82
11 2.7469E 00	0.74	1.43	3.37	1.33	1.98	3.96	1.39	2.37	7.28	1.89	2.71	5.70
12 1.7093E 00	1.00	1.27	2.80	1.48	2.40	4.05	1.15	2.20	6.65	1.40	2.78	5.21
13 1.0637E 00	1.02	1.80	3.71	1.31	2.32	6.09	1.30	2.21	5.51	1.37	2.55	4.70
14 6.6188E-01	1.21	1.83	3.79	1.08	2.06	5.36	1.23	2.04	4.32	1.53	2.37	4.61
15 4.1187E-01	1.06	1.78	3.70	1.02	2.04	5.18	1.18	2.08	3.70	1.40	2.19	4.08
16 2.5630E-01	1.06	2.00	5.08	0.87	1.82	4.83	1.17	2.01	3.26	1.38	2.08	3.55
17 1.5949E-01	0.96	1.83	4.32	0.94	1.72	3.93	0.95	1.89	3.14	1.45	1.96	3.21
18 9.9243E-02	0.96	1.94	4.24	0.88	1.72	3.07	1.01	1.85	3.08	1.43	1.92	2.82
19 6.1756E-02	0.72	1.78	3.97	0.76	1.53	2.80	1.02	1.75	3.40	1.45	1.94	2.26
20 3.8429E-02	0.73	1.53	3.79	0.98	1.49	2.65	1.26	1.62	2.86	1.30	1.67	2.22
21 2.3913E-02	0.69	1.39	3.03	0.95	1.50	2.23	1.10	1.73	2.52	1.00	1.73	1.88
22 1.4881E-02	0.76	1.40	2.57	0.83	1.57	2.27	1.05	1.67	2.37	1.07	1.53	1.39
23 9.2597E-03	0.69	1.27	2.28	0.71	1.40	2.19	1.14	1.58	2.06	1.13	1.14	1.42
24 5.7621E-03	0.64	1.24	2.08	0.82	1.57	2.37	1.04	1.50	2.11	1.01	1.13	1.11
25 3.5856E-03	0.81	1.24	2.00	0.81	1.31	2.52	1.14	1.64	1.86	1.05	1.18	1.10
26 2.2312E-03	0.76	1.18	1.86	1.08	1.24	2.16	1.14	1.36	1.73	1.12	1.21	0.99
27 1.3884E-03	0.67	1.10	1.79	1.03	1.43	2.07	0.95	1.22	1.42	0.85	1.10	0.75
28 8.6396E-04	0.65	1.23	1.76	0.86	1.50	1.52	0.93	1.22	1.13	0.82	1.09	0.79
29 5.3762E-04	0.62	1.19	1.85	0.93	1.48	1.50	0.80	1.34	1.02	0.72	1.13	0.85
30 3.3455E-04	0.78	1.22	1.87	0.83	1.29	1.68	0.89	1.15	0.97	0.81	0.87	0.66
31 2.0818E-04	0.82	1.33	1.89	0.93	1.45	1.64	0.87	1.06	0.76	0.89	0.90	0.64
32 1.2954E-04	1.11	1.44	1.57	0.99	1.26	1.39	0.92	1.03	0.81	0.75	0.84	0.58
33 8.0611E-05	1.17	1.57	1.60	1.44	1.17	1.08	1.13	0.94	0.73	0.94	0.81	0.41
34 5.0162E-05	1.62	1.30	1.35	1.83	1.03	1.01	1.88	0.94	0.62	1.45	0.91	0.59
35 3.1214E-05	2.14	1.46	1.24	2.37	1.27	0.96	2.51	1.35	0.56	2.05	1.16	0.46
36 1.9424E-05	2.59	1.62	1.26	3.12	1.86	0.79	2.99	1.79	0.55	3.84	1.53	0.39
37 1.20287E-05	3.30	2.11	1.31	3.53	2.68	0.80	4.91	2.79	0.50	6.03	2.95	0.41
38 7.5213E-06	4.53	3.09	1.19	5.16	3.55	0.75	5.95	3.92	0.56	6.65	4.72	0.44
39 4.6803E-06	5.45	4.03	1.05	6.36	4.47	0.67	7.95	5.81	0.77	9.43	7.18	0.52
40 2.9124E-06	7.09	5.87	1.47	9.14	7.03	1.02	10.92	8.41	0.92	9.96	8.30	0.95
41 1.8123E-06	9.95	7.73	1.65	10.49	8.24	1.25	9.41	7.48	1.23	9.43	7.94	1.63
42 1.1277E-06	9.94	7.90	1.64	10.48	7.96	1.97	9.87	8.47	3.06	5.81	5.23	2.22
43 7.0176E-07	11.44	9.43	2.94	9.99	8.63	3.21	5.22	4.44	0.91	1.31	1.31	1.28
44 4.3669E-07	8.63	6.99	2.40	4.52	3.65	0.61	1.21	1.21	1.19	0.0	0.0	0.0
45 2.7174E-07	5.27	4.25	0.96	1.92	1.87	1.15	0.0	0.0	0.0	0.0	0.0	0.0
46 1.6909E-07	2.49	2.34	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47 1.0522E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48 6.5477E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49 4.0744E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50 2.5354E-08	0.04	0.04	0.0	0.04	0.04	0.0	0.04	0.04	0.0	0.04	0.04	0.0

CARBON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4150.00

MID-POINT ABSORP COEFF	PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	6.2671E-02	0.16	0.0	0.0	0.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	3.8461E-02	0.57	0.19	0.0	0.51	0.0	0.0	0.31	0.0	0.0	0.02	0.0	0.0
3	2.3604E-02	0.57	0.58	0.0	0.66	0.63	0.0	0.89	0.32	0.0	0.79	0.03	0.0
4	1.4486E-02	0.59	1.02	0.0	0.77	1.21	0.0	1.13	1.35	0.0	2.38	1.14	0.0
5	8.8900E-01	0.78	0.82	1.61	1.05	0.99	1.04	1.72	1.47	0.32	2.88	3.53	0.10
6	5.4558E-01	0.73	1.07	2.39	1.26	1.28	3.29	2.10	2.50	3.72	2.46	3.95	2.87
7	3.3483E-01	0.90	1.09	3.17	1.39	1.93	3.20	1.94	2.96	4.21	2.27	3.55	9.32
8	2.0548E-01	1.04	1.33	2.70	1.50	1.96	3.68	1.71	2.84	6.52	2.22	3.14	10.22
9	1.2611E-01	1.13	1.76	3.24	1.38	2.42	4.25	1.53	2.68	6.83	1.67	3.06	7.61
10	7.7392E-00	1.13	1.69	3.37	1.38	2.42	5.53	1.33	2.50	7.64	1.72	2.89	6.34
11	4.7496E-00	1.15	1.96	4.36	1.05	2.23	5.51	1.30	2.32	6.17	1.45	2.65	6.25
12	2.9148E-00	1.05	2.19	4.05	1.06	2.18	5.93	1.14	2.36	5.03	1.55	2.71	5.90
13	1.7688E-00	0.81	1.99	4.60	0.96	1.94	5.67	1.09	2.30	4.45	1.61	2.29	4.83
14	1.0578E-00	0.99	1.89	5.21	0.94	2.02	4.55	1.08	2.04	4.43	1.47	2.08	4.48
15	6.7374E-01	0.77	1.69	4.69	0.81	1.75	3.97	1.12	1.67	4.31	1.13	1.82	3.72
16	4.1348E-01	0.74	1.62	4.29	0.86	1.70	3.24	1.16	1.92	3.67	1.20	1.68	3.35
17	2.5375E-01	0.82	1.54	3.65	0.86	1.65	3.23	1.18	1.53	3.04	1.38	1.60	2.85
18	1.5573E-01	0.62	1.46	3.06	0.88	1.38	3.31	1.03	1.48	3.05	1.27	1.56	2.64
19	9.5571E-02	0.65	1.46	2.98	0.79	1.24	3.12	1.04	1.28	2.90	1.09	1.80	2.17
20	5.8653E-02	0.75	1.25	2.41	1.00	1.37	2.76	0.97	1.42	2.37	1.38	1.74	2.07
21	3.5995E-02	0.64	1.15	2.55	0.89	1.43	2.41	0.98	1.61	2.30	1.15	1.44	1.66
22	2.2090E-02	0.73	1.08	2.85	0.92	1.24	2.25	1.03	1.50	1.93	1.08	1.42	1.60
23	1.3557E-02	0.70	1.25	2.55	0.76	1.21	2.57	0.95	1.35	1.81	1.16	1.35	1.47
24	8.3200E-03	0.85	1.06	1.97	0.84	1.34	1.92	1.06	1.40	1.73	1.14	1.13	1.67
25	5.1060E-03	0.77	1.33	2.00	0.95	1.23	1.64	0.90	1.35	1.53	0.96	1.09	1.42
26	3.1336E-03	0.67	1.29	2.06	0.82	1.29	1.68	0.92	1.28	1.33	0.85	1.09	1.08
27	1.9231E-03	0.78	1.22	1.91	0.85	1.28	1.57	0.93	1.36	1.25	0.56	1.27	1.05
28	1.1802E-03	0.75	1.02	1.56	0.78	1.12	1.25	0.91	1.15	1.03	0.40	1.07	0.84
29	7.2430E-04	0.87	1.02	1.48	0.92	1.46	1.46	0.96	1.31	1.09	0.52	0.97	0.72
30	4.4450E-04	0.80	1.13	1.33	0.95	1.30	1.25	0.89	1.07	1.18	0.55	0.84	0.62
31	2.7279E-04	1.14	1.17	1.33	0.95	1.23	1.08	0.89	1.13	1.26	0.72	0.84	0.55
32	1.6742E-04	1.44	1.34	1.27	1.10	1.47	1.07	1.02	1.15	0.87	0.67	0.72	0.45
33	1.0274E-04	1.69	1.55	1.02	1.43	1.08	0.96	1.20	0.92	0.67	0.61	0.54	0.42
34	6.3054E-05	2.33	1.79	1.19	2.43	1.45	0.86	1.79	1.10	0.63	0.94	0.71	0.61
35	3.8696E-05	3.16	2.48	1.11	3.21	1.96	0.79	2.69	1.17	0.63	2.52	0.78	0.52
36	2.3748E-05	3.88	2.93	1.06	4.24	2.75	0.96	4.34	2.18	0.53	4.91	1.79	0.50
37	1.4574E-05	4.97	3.53	0.99	5.65	3.43	1.08	6.22	3.97	0.50	7.03	4.23	0.34
38	8.9443E-06	7.70	5.84	1.28	7.95	6.11	0.97	8.05	5.94	0.53	8.77	6.51	0.41
39	5.4892E-06	9.87	8.23	1.83	10.30	7.93	1.17	10.67	8.70	0.86	10.26	8.58	0.75
40	3.3687E-06	12.12	8.94	2.68	12.12	9.66	2.42	11.86	9.50	2.19	9.81	8.32	1.43
41	2.0674E-06	13.78	11.76	4.50	12.65	10.87	3.94	11.19	9.78	3.74	9.67	8.49	3.49
42	1.2688E-06	10.97	9.18	4.49	8.90	7.82	3.86	6.06	5.43	3.20	5.16	4.99	3.19
43	7.7865E-07	3.41	3.09	1.21	1.13	1.02	0.66	0.69	0.69	0.55	0.59	0.59	0.49
44	4.7786E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	2.9327E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	1.7998E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	1.1045E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	6.7786E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	4.1601E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	2.5530E-08	0.03	0.02	0.0	0.03	0.02	0.0	0.03	0.02	0.0	0.03	0.02	0.0

CARBON MONOXIDE--FIRST OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4250.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 6.2671E 02	0.13	0.0	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 3.8461E 02	0.53	0.06	0.0	0.71	0.0	0.0	0.64	0.0	0.0	0.37	0.0	0.0
3 2.3604E 02	0.90	0.82	0.0	1.17	0.88	0.0	1.41	0.76	0.0	1.57	0.61	0.0
4 1.4486E 02	1.05	1.36	0.05	1.15	1.41	0.0	1.40	1.96	0.0	1.72	2.30	0.0
5 8.8900E 01	1.07	1.34	1.08	1.19	1.94	0.47	1.51	2.16	0.53	1.63	2.28	0.72
6 5.4558E 01	0.98	1.86	4.06	1.07	1.96	5.03	1.09	2.06	5.11	1.64	2.27	6.44
7 3.3483E 01	0.81	1.58	4.20	1.04	1.75	5.26	1.12	1.86	7.42	1.61	2.45	6.66
8 2.0548E 01	0.79	1.56	4.76	0.77	1.72	5.68	1.12	1.69	5.88	1.56	2.32	6.01
9 1.2611E 01	0.65	1.46	4.86	0.69	1.34	5.40	1.18	2.11	4.71	1.50	2.34	5.53
10 7.7392E 00	0.55	1.31	4.54	0.88	1.59	4.45	1.03	1.95	4.55	1.43	2.46	5.28
11 4.7496E 00	0.63	1.09	4.53	0.89	1.42	3.93	1.05	1.71	4.35	1.19	2.00	5.00
12 2.9148E 00	0.68	1.25	3.53	0.78	1.55	3.61	0.91	1.70	3.97	1.02	1.80	4.14
13 1.7888E 00	0.67	1.37	2.97	0.66	1.52	3.00	1.01	1.55	3.96	1.15	1.93	3.99
14 1.0978E 00	0.60	1.25	2.87	0.80	1.26	3.06	0.96	1.49	2.86	1.12	1.68	3.53
15 6.7374E-01	0.71	1.16	2.62	0.84	1.22	2.93	0.85	1.46	2.58	1.01	1.99	3.10
16 4.1348E-01	0.50	1.14	2.27	0.77	1.40	2.97	0.76	1.36	2.43	1.05	1.55	2.86
17 2.5375E-01	0.65	1.11	2.44	0.86	1.09	1.94	0.88	1.51	2.87	0.87	1.38	2.70
18 1.5573E-01	0.76	1.03	2.31	0.64	1.22	1.95	0.80	1.65	2.61	0.96	1.35	2.48
19 9.5571E-02	0.67	1.16	2.23	0.75	1.37	1.97	0.71	1.37	2.38	0.86	1.12	2.02
20 5.8653E-02	0.69	1.19	1.78	0.55	1.20	2.01	0.88	1.36	2.19	0.79	0.89	2.02
21 3.5995E-02	0.68	0.87	1.68	0.63	1.23	2.35	0.72	1.22	1.93	0.96	1.12	1.82
22 2.2090E-02	0.47	0.97	1.59	0.53	1.17	2.14	0.73	0.79	2.16	0.86	0.86	1.88
23 1.3557E-02	0.63	1.08	1.60	0.74	1.10	1.99	0.64	1.04	1.86	0.73	0.84	1.47
24 8.3200E-03	0.44	1.01	1.75	0.61	1.19	1.83	0.70	0.88	1.71	0.75	0.95	1.46
25 5.1060E-03	0.45	1.08	2.01	0.74	1.10	1.76	0.55	0.81	1.40	0.46	0.89	1.33
26 3.1336E-03	0.53	1.02	1.79	0.59	1.00	1.62	0.59	0.92	1.42	0.45	0.65	1.22
27 1.9231E-03	0.63	1.04	1.71	0.67	0.98	1.54	0.68	0.81	1.49	0.42	0.72	1.17
28 1.1802E-03	0.65	1.30	1.55	0.56	0.81	1.57	0.68	0.77	1.25	0.51	0.82	1.08
29 7.2430E-04	0.57	1.16	1.54	0.47	0.68	1.24	0.72	0.67	1.32	0.53	0.68	1.03
30 4.4450E-04	0.78	0.84	1.47	0.75	0.66	1.43	0.48	0.70	1.09	0.48	0.66	0.91
31 2.7279E-04	0.99	0.74	1.41	0.82	0.78	1.10	0.53	0.80	1.01	0.47	0.53	0.81
32 1.6742E-04	1.57	0.90	1.11	1.09	0.84	1.10	0.73	0.79	0.92	0.40	0.68	0.87
33 1.0274E-04	2.06	0.92	1.34	1.54	1.04	1.22	1.40	0.84	0.85	0.75	0.63	0.81
34 6.3054E-05	2.81	1.43	1.23	2.75	1.26	1.12	2.32	0.93	0.99	1.40	0.56	0.74
35 3.8696E-05	4.21	2.56	1.21	3.83	2.31	1.15	3.46	1.35	0.94	2.64	0.83	0.72
36 2.3748E-05	5.11	4.06	1.14	5.42	3.42	1.08	5.26	3.05	0.76	4.54	1.86	0.67
37 1.4574E-05	7.57	5.59	1.38	7.72	5.50	1.01	6.72	5.19	0.74	6.35	4.51	0.67
38 8.9443E-06	9.71	8.46	1.88	9.56	8.02	1.22	9.21	7.39	0.97	7.65	6.09	0.86
39 5.4892E-06	13.12	11.22	3.78	12.79	11.24	2.65	12.01	10.69	1.57	10.87	9.66	1.09
40 3.3687E-06	15.98	15.06	7.59	15.17	14.32	7.47	14.02	13.24	6.54	12.49	11.49	3.21
41 2.0674E-06	12.30	11.50	7.94	12.22	11.44	7.82	12.96	12.35	8.25	13.88	13.26	8.81
42 1.2688E-06	4.69	4.06	2.20	4.52	4.04	1.93	5.55	5.03	2.43	9.33	8.96	4.89
43 7.7865E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 4.7786E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45 2.9327E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46 1.7998E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47 1.1045E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48 6.7786E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49 4.1601E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50 2.5530E-08	0.03	0.03	0.0	0.03	0.03	0.0	0.03	0.03	0.0	0.03	0.03	0.0

CARBON MONOXIDE--FIRST OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4350.00

MID-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680	TEMP = 2016			TEMP = 2520			TEMP = 3360				
		TURB VEL			TURB VEL			TURB VEL				
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S
1	7.8164E 02	0.20	0.0	0.0	0.17	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	4.7756E 02	0.56	0.27	0.0	0.54	0.0	0.0	0.25	0.0	0.0	0.0	0.0
3	2.9178E 02	0.53	0.71	0.0	0.56	0.82	0.0	0.84	0.41	0.0	0.64	0.01
4	1.7827E 02	0.43	0.78	0.0	0.65	0.89	0.0	1.01	1.11	0.0	1.25	0.90
5	1.0892E 02	0.57	0.72	1.99	0.77	0.97	1.15	0.86	1.50	0.0	1.33	1.96
6	6.6544E 01	0.59	0.84	2.48	0.61	1.23	3.17	0.85	1.28	3.90	1.09	1.66
7	4.0657E 01	0.44	1.05	2.51	0.63	1.02	3.24	0.85	1.31	4.98	0.95	1.64
8	2.4840E 01	0.49	1.02	2.82	0.62	1.16	3.93	0.74	1.39	3.57	0.93	1.42
9	1.5177E 01	0.50	0.99	3.09	0.68	1.26	2.92	0.67	1.19	2.52	0.78	1.07
10	9.2725E 00	0.61	1.03	2.63	0.58	1.04	2.12	0.64	0.88	2.14	0.56	1.18
11	5.6652E 00	0.61	0.88	2.03	0.47	0.81	1.81	0.44	0.83	1.63	0.87	1.00
12	3.4613E 00	0.42	0.80	1.70	0.51	0.65	1.52	0.50	0.87	1.51	0.57	1.18
13	2.1147E 00	0.39	0.69	1.37	0.37	0.62	1.37	0.55	0.75	1.39	0.50	0.72
14	1.2920E 00	0.41	0.46	1.28	0.34	0.60	1.25	0.49	0.63	1.43	0.44	0.58
15	7.8940E-01	0.29	0.52	1.27	0.50	0.68	1.16	0.44	0.78	1.67	0.40	0.81
16	4.8230E-01	0.33	0.68	1.04	0.34	0.59	1.15	0.36	0.75	1.75	0.57	0.50
17	2.9467E-01	0.34	0.49	1.00	0.43	0.50	1.30	0.32	0.56	1.76	0.35	0.51
18	1.8004E-01	0.36	0.47	1.04	0.30	0.78	1.26	0.40	0.63	1.73	0.39	0.57
19	1.1000E-01	0.29	0.58	0.99	0.33	0.65	1.52	0.47	0.47	1.35	0.31	0.44
20	6.7205E-02	0.33	0.51	1.18	0.24	0.57	1.57	0.37	0.40	1.20	0.20	0.38
21	4.1060E-02	0.29	0.54	1.15	0.30	0.54	1.56	0.18	0.50	1.07	0.43	0.56
22	2.5087E-02	0.33	0.81	1.20	0.44	0.53	1.16	0.34	0.48	1.05	0.32	0.33
23	1.5327E-02	0.22	0.63	1.22	0.41	0.50	1.05	0.19	0.40	0.95	0.18	0.31
24	9.3645E-03	0.18	0.53	1.43	0.22	0.24	1.10	0.18	0.25	0.86	0.23	0.44
25	5.7215E-03	0.41	0.38	1.29	0.23	0.42	0.97	0.19	0.42	0.84	0.11	0.28
26	3.4956E-03	0.37	0.35	1.06	0.17	0.38	0.79	0.30	0.35	0.78	0.14	0.22
27	2.1357E-03	0.28	0.28	0.87	0.16	0.31	0.87	0.33	0.25	0.78	0.32	0.25
28	1.3049E-03	0.26	0.35	0.81	0.18	0.25	0.72	0.24	0.23	0.77	0.23	0.33
29	7.9724E-04	0.22	0.35	0.86	0.25	0.35	0.65	0.13	0.25	0.53	0.20	0.27
30	4.8709E-04	0.26	0.33	0.79	0.23	0.32	0.87	0.11	0.26	0.74	0.21	0.27
31	2.9760E-04	0.41	0.35	0.79	0.33	0.21	0.73	0.14	0.14	0.69	0.11	0.35
32	1.8182E-04	0.93	0.31	0.63	0.59	0.20	0.62	0.25	0.28	0.64	0.08	0.44
33	1.1109E-04	1.14	0.45	0.67	1.09	0.30	0.54	0.69	0.43	0.61	0.40	0.30
34	6.7872E-05	1.75	0.97	0.71	1.45	0.75	0.65	1.20	0.56	0.58	0.54	0.22
35	4.1468E-05	2.31	1.61	0.75	2.08	1.36	0.67	1.86	0.87	0.53	1.25	0.46
36	2.5336E-05	3.29	2.67	0.78	3.12	2.45	0.79	2.88	1.71	0.69	2.01	0.72
37	1.5479E-05	4.89	4.04	0.83	4.57	3.72	0.74	3.89	2.99	0.75	3.21	2.03
38	9.4575E-06	6.58	5.81	1.94	6.13	5.39	0.96	5.52	5.02	0.80	4.47	3.82
39	5.7783E-06	9.66	9.28	4.32	8.02	7.74	3.05	6.46	6.26	1.35	5.14	5.02
40	3.5303E-06	17.02	16.18	9.82	12.65	12.25	8.12	8.82	8.55	4.36	6.52	6.11
41	2.1569E-06	1.13	0.91	0.29	8.49	7.70	3.71	13.41	12.74	8.56	8.87	8.46
42	1.3178E-06	0.24	0.24	0.24	0.29	0.29	0.29	2.81	2.49	0.72	12.88	12.28
43	8.0515E-07	0.36	0.36	0.35	0.44	0.44	0.43	0.49	0.49	0.49	1.66	1.64
44	4.9193E-07	0.57	0.57	0.57	0.69	0.69	0.70	0.78	0.78	0.77	0.73	0.74
45	3.0055E-07	0.99	0.99	0.99	1.27	1.27	1.26	1.50	1.50	1.50	1.37	1.37
46	1.8363E-07	2.18	2.18	2.18	1.54	1.54	1.54	1.05	1.05	1.05	1.24	1.24
47	1.1219E-07	0.14	0.14	0.14	1.24	1.24	1.24	1.71	1.71	1.71	1.26	1.26
48	6.8547E-08	3.18	3.18	3.18	2.60	2.60	2.60	2.30	2.30	2.30	2.41	2.41
49	4.1880E-08	2.46	2.46	2.46	2.69	2.69	2.69	2.63	2.63	2.63	1.86	1.86
50	2.5588E-08	29.26	29.26	29.26	28.49	28.49	28.49	28.37	28.37	28.37	29.49	29.49

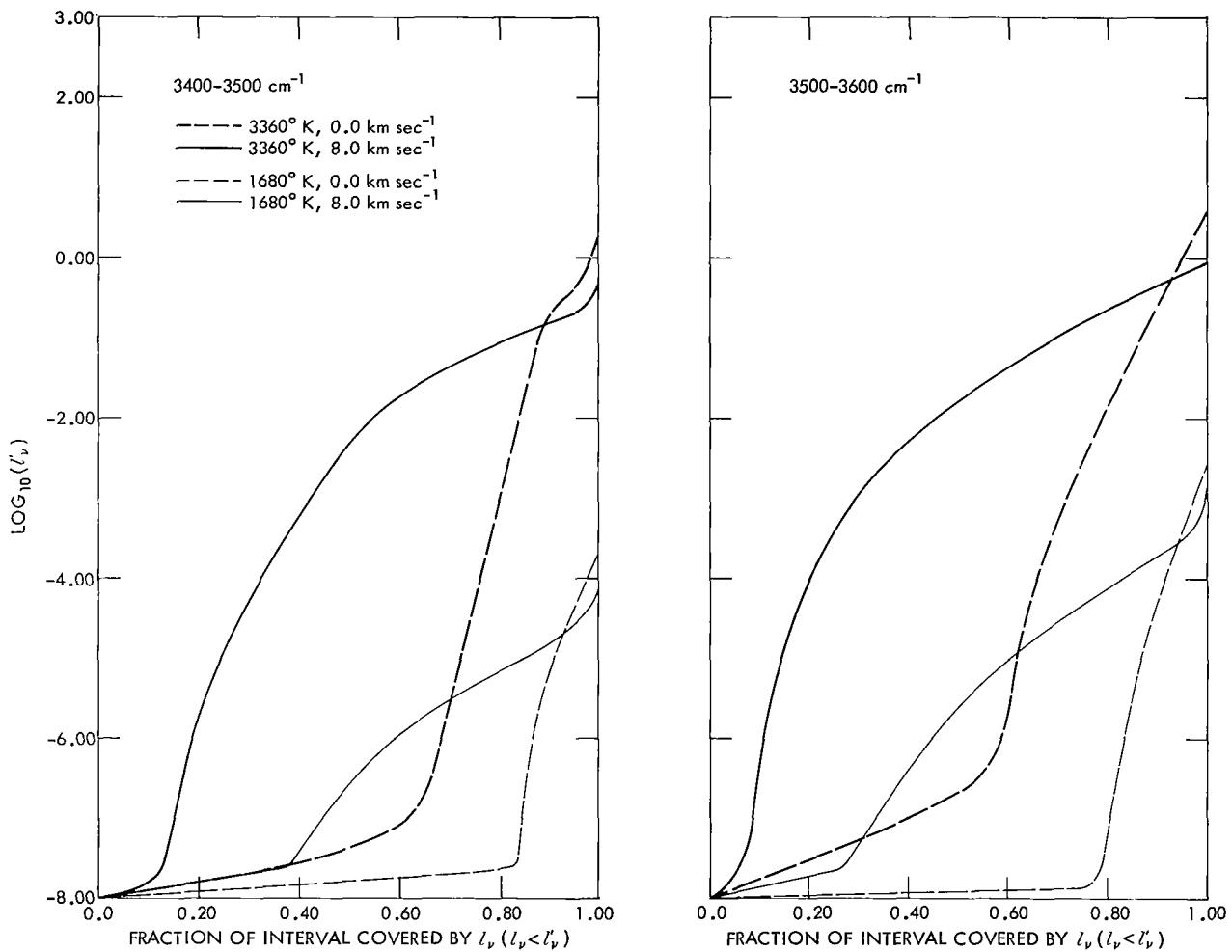


Figure B1—Cumulative opacity distribution functions for the first-overtone band of CO, 3400–3600 cm^{-1} .

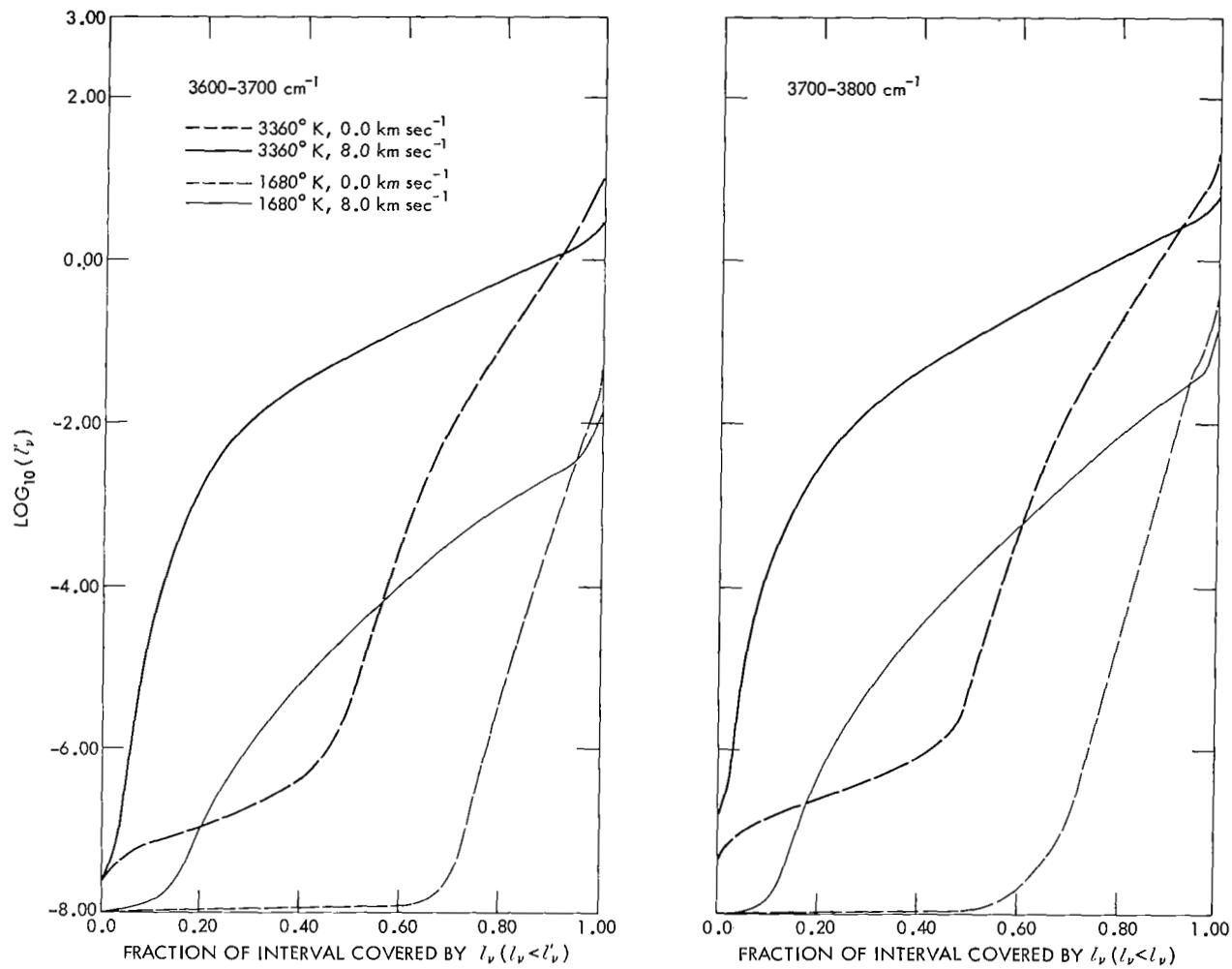


Figure B2—Cumulative opacity distribution functions for the first-overtone band of CO, 3600–3800 cm^{-1} .

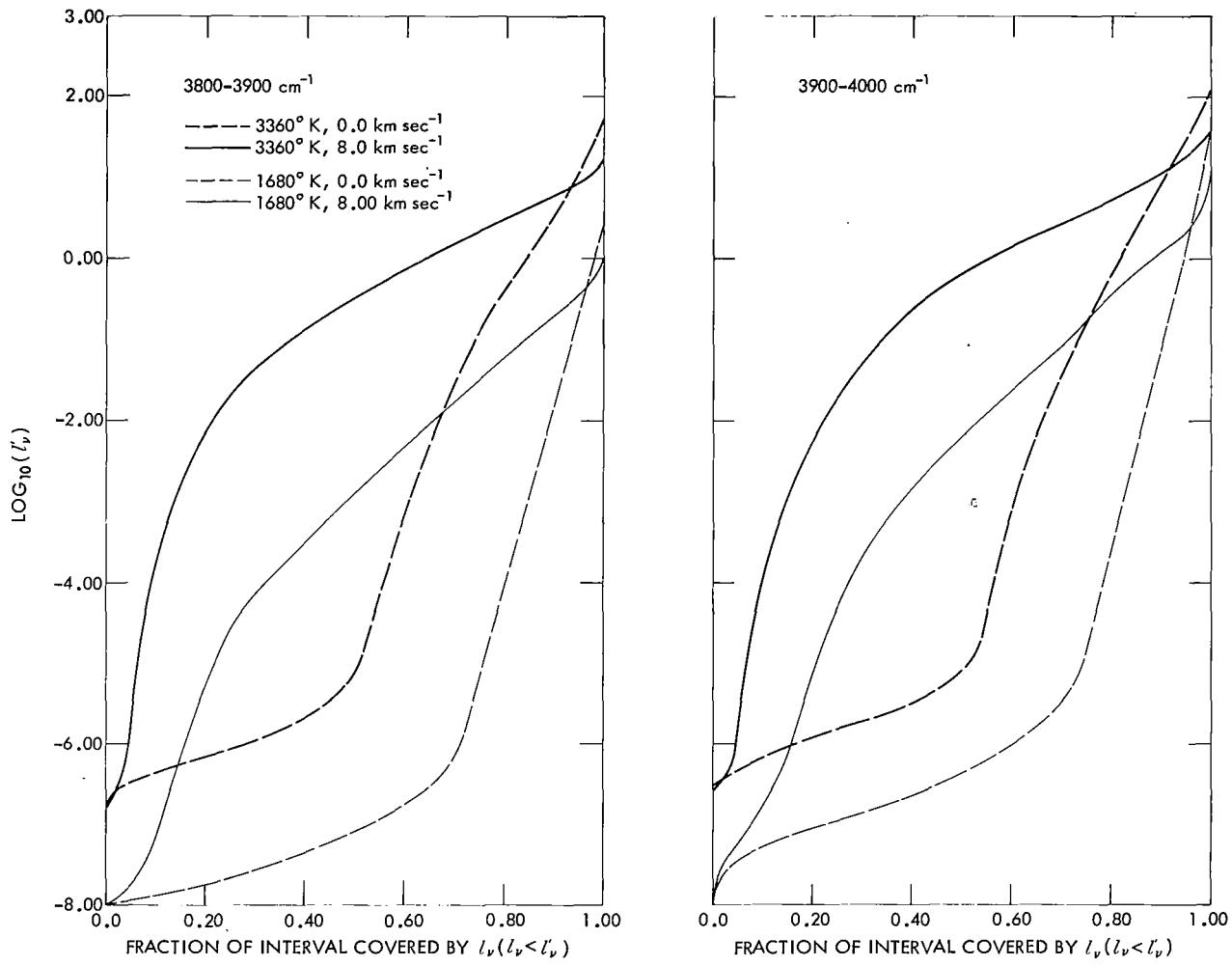


Figure B3—Cumulative opacity distribution functions for the first-overtone band of CO, $3800-4000 \text{ cm}^{-1}$.

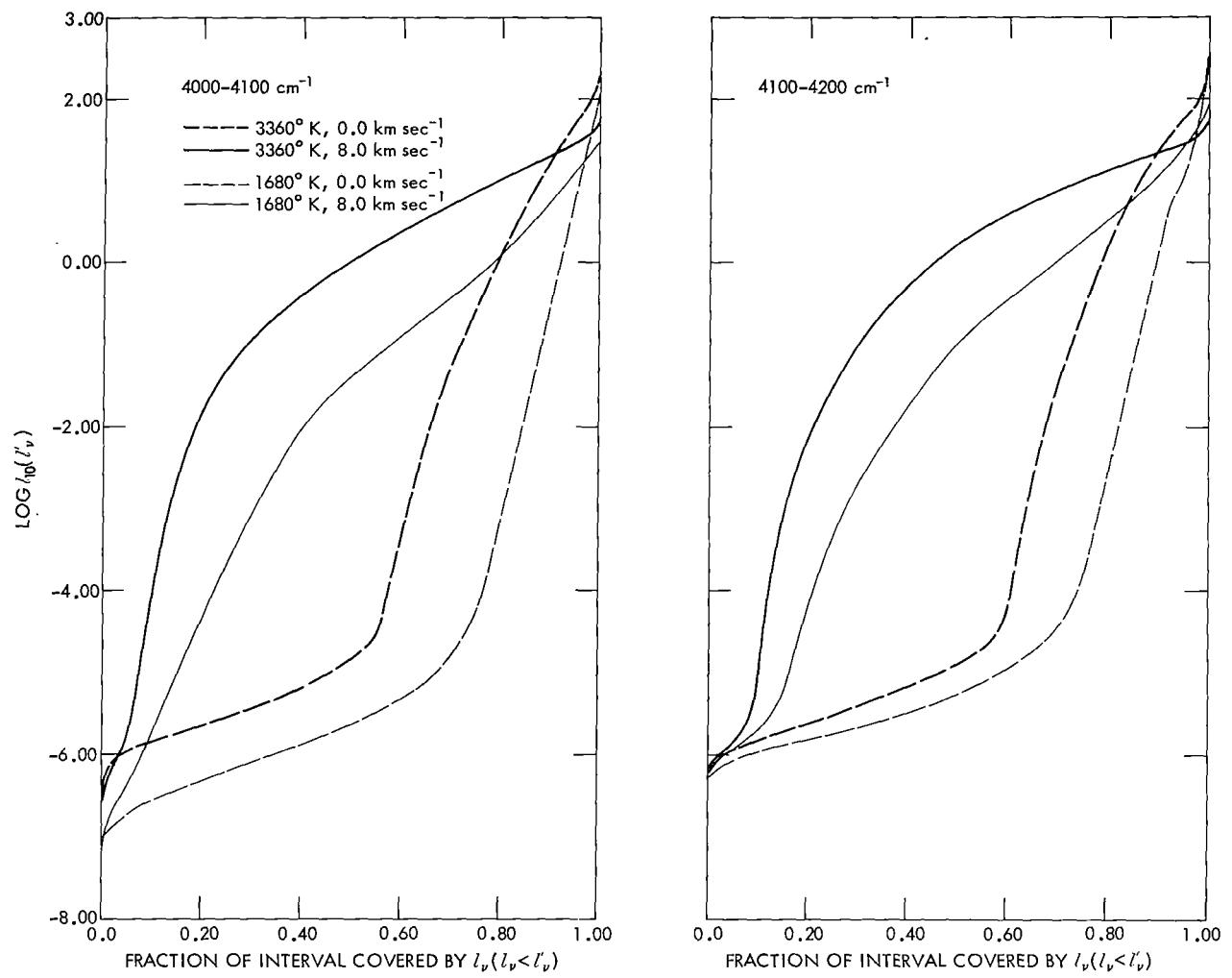


Figure B4—Cumulative opacity distribution functions for the first-overtone band of CO, $4000\text{--}4200\text{ cm}^{-1}$.

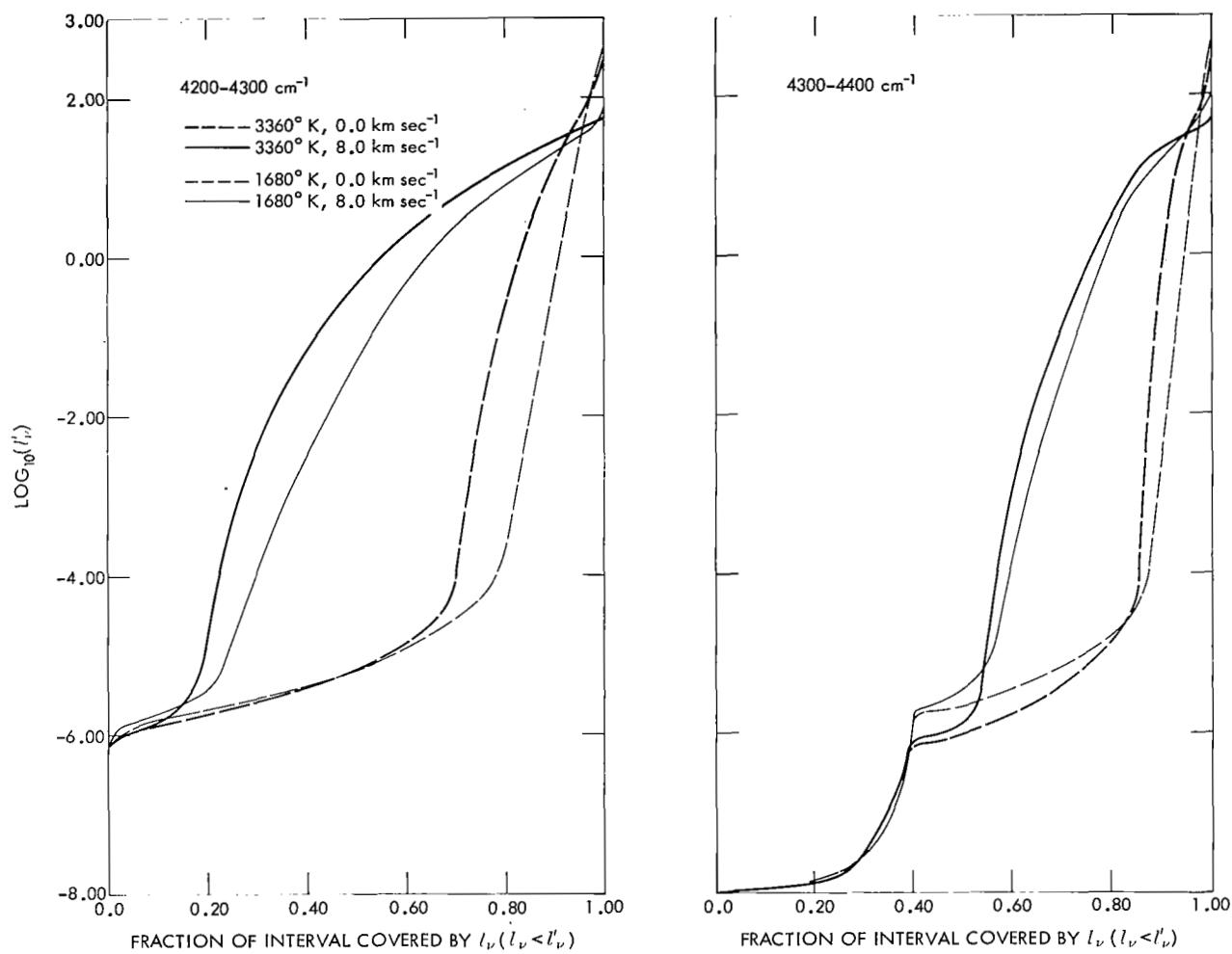


Figure B5—Cumulative opacity distribution functions for the first-overtone band of CO, $4200\text{--}4400\text{ cm}^{-1}$.

Appendix C

**Opacity Probability Distribution Functions
for the Second-Overtone Band**

CARBON MONOXIDE - SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4550.00

MID-POINT AB90RR COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.5185E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 3.6900E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3
3 3.0133E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
4 2.4610E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
5 2.0098E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
6 1.6413E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.03	0.0
7 1.3404E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.32	0.0
8 1.0947E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.04	0.0
9 8.9397E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.05	0.0
10 7.3007E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.14	0.0
11 5.9622E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.25	0.0
12 4.8691E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.34	0.10
13 3.9764E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.35	0.05
14 3.2473E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.47	0.12
15 2.6520E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.44	0.43
16 2.1658E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.45	0.50
17 1.7687E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.39	0.53
18 1.4444E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.55	1.13
19 1.1796E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.51	1.33
20 9.6333E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.53	1.34
21 7.8671E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.51	1.31
22 6.4248E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.43	1.27
23 5.2469E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.49	1.32
24 4.2849E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.46	1.34
25 3.4993E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.51	1.40
26 2.8577E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.57	1.37
27 2.3338E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.45	1.22
28 1.9059E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.20	0.53	1.24
29 1.5565E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.42	1.36
30 1.2711E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.20	0.48	1.20
31 1.0301E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.01	0.0	0.18	0.49	1.11
32 8.4776E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.02	0.0	0.23	0.44	1.17
33 6.9233E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.03	0.0	0.15	0.41	1.32
34 5.6540E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.04	0.0	0.28	0.39	1.38
35 4.6174E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.08	0.0	0.30	0.39	1.24
36 3.7708E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.16	0.0	0.19	0.35	1.23
37 3.0795E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.21	0.03	0.22	0.42	1.04
38 2.5149E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.28	0.08	0.11	0.41	0.90
39 2.0538E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.30	0.04	1.24	2.35	0.85
40 1.6773E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.45	0.15	0.21	0.18	0.91
41 1.3698E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.40	0.36	0.26	0.36	0.56
42 1.1186E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.41	0.45	0.22	3.29	1.78
43 9.1354E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.46	0.70	0.10	0.29	0.77
44 7.4605E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.42	0.87	0.23	0.24	0.84
45 6.0927E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.58	1.08	0.17	0.23	0.79
46 4.9575E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.62	1.21	0.25	0.32	0.65
47 4.0635E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.56	1.37	0.18	0.32	0.68
48 3.3185E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.62	1.25	0.22	0.33	0.75
49 2.7101E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.55	1.43	0.23	0.37	0.84
50 2.2132E-08	100.00	100.00	100.00	100.00	100.00	100.00	95.31	93.79	90.90	89.04	33.85	53.20

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4650.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.5185E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
2 3.6900E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.0	0.0
3 3.0135E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.02	0.0
4 2.4610E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.20	0.0
5 2.0098E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.20	0.0
6 1.6413E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.24	0.0
7 1.3404E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.28	0.0
8 1.0947E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.39	0.15
9 8.9397E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.36	0.24
10 7.3007E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.44	0.57
11 5.9622E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.48	0.51
12 4.8691E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.52	0.74
13 3.9764E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.49	1.05
14 3.2473E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.51	1.18
15 2.6520E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.53	1.23
16 2.1658E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.51	1.26
17 1.7687E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.53	1.36
18 1.4444E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.33	1.38
19 1.1796E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.53	1.26
20 9.6333E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.53	1.29
21 7.8671E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.35	0.49	1.30
22 6.4248E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.49	1.38
23 5.2469E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.42	1.33
24 4.2849E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.31	0.47	1.29
25 3.4993E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.22	0.40	1.18
26 2.8577E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.36	0.51	1.17
27 2.3338E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.16	0.03	0.0	0.33	0.44	1.19
28 1.9059E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.10	0.0	0.33	0.47	1.26
29 1.5556E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.20	0.0	0.42	0.46	1.31
30 1.2711E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.23	0.0	0.31	0.51	1.09
31 1.0381E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.23	0.0	0.30	0.58	1.18
32 8.4776E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.29	0.11	0.41	0.51	1.38
33 6.9233E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.38	0.20	0.34	0.59	1.15
34 5.6540E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.36	0.37	0.26	0.54	1.14
35 4.6174E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.38	0.53	0.31	0.56	1.16
36 3.7708E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.46	0.64	0.26	0.54	1.21
37 3.0795E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.19	0.44	0.69	0.24	0.44	1.19
38 2.5149E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.50	1.09	0.17	0.36	1.20
39 2.0538E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.53	1.05	0.21	0.46	1.32
40 1.6773E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.48	1.17	0.24	0.36	1.18
41 1.3698E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.54	1.22	0.16	0.38	1.17
42 1.1186E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.48	1.38	0.23	0.40	1.00
43 9.1354E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.31	0.43	1.30	0.25	0.35	0.80
44 7.4605E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.47	1.29	0.26	0.28	0.82
45 6.0927E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.57	1.17	0.19	0.29	0.86
46 4.9757E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.48	1.18	0.31	0.32	0.89
47 4.0635E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.54	1.52	0.24	0.30	0.91
48 3.3185E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.23	0.60	1.39	0.31	0.38	0.95
49 2.7101E-08	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.49	1.63	0.22	0.39	1.36
50 2.2132E-08	100.00	100.00	100.00	100.00	100.00	100.00	93.69	90.79	82.07	86.33	80.22	54.41

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4750.00

PER GM OF CO	MID-POINT ABSORP. COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	1.7825E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.4159E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1.1247E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
4	8.9337E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0
5	7.0963E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.01	0.0
6	5.6368E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.07	0.0
7	4.4774E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.34	0.26	0.0
8	3.5566E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.51	0.0
9	2.8251E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.55	0.0
10	2.2440E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.55	0.63	0.0
11	1.7825E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.67	0.38
12	1.4159E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.66	1.10
13	1.1247E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.70	1.75
14	8.9337E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.62	1.57
15	7.0963E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.54	1.77
16	5.6368E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.62	1.73
17	4.4775E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.43	0.76	1.74
18	3.5566E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.69	1.54
19	2.8251E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.68	1.53
20	2.2440E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.55	1.60
21	1.7825E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.67	1.62
22	1.4159E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.35	0.57	1.66
23	1.1247E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	0.33	0.55	1.50
24	8.9337E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.50	0.59	1.63
25	7.0963E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.04	0.0	0.38	0.55	1.44
26	5.6368E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.11	0.0	0.48	0.50	1.56
27	4.4775E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.23	0.0	0.41	0.72	1.33
28	3.5566E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.45	0.38	0.0	0.49	0.52	1.41
29	2.8251E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.50	0.0	0.60	0.56	1.16
30	2.2441E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.57	0.01	0.42	0.80	1.35
31	1.7825E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.67	0.43	0.44	0.79	1.33
32	1.4159E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.63	1.00	0.43	0.65	1.34
33	1.1247E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.71	1.32	0.41	0.78	1.27
34	8.9338E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.54	1.62	0.47	0.73	1.51
35	7.0963E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.39	0.56	1.71	0.48	0.60	1.47
36	5.6368E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.62	1.50	0.36	0.69	1.70
37	4.4775E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.38	0.61	1.78	0.35	0.70	1.75
38	3.5566E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.62	1.50	0.29	0.61	1.51
39	2.8251E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.32	0.66	1.61	0.28	0.54	1.54
40	2.2441E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.62	1.44	0.30	0.55	1.60
41	1.7825E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.55	1.56	0.25	0.45	1.48
42	1.4159E-07	0.0	0.0	0.0	0.02	0.0	0.0	0.43	0.70	1.55	0.37	0.46	1.22
43	1.1247E-07	0.0	0.0	0.0	0.02	0.0	0.0	0.26	0.52	1.55	0.23	0.47	1.21
44	8.9338E-08	0.0	0.0	0.0	0.11	0.0	0.0	0.43	0.60	1.47	0.27	0.40	1.08
45	7.0964E-08	0.0	0.0	0.0	0.17	0.0	0.0	0.40	0.53	1.65	0.24	0.43	0.96
46	5.6369E-08	0.0	0.0	0.0	0.19	0.10	0.0	0.33	0.60	1.47	0.25	0.41	1.10
47	4.4776E-08	0.0	0.0	0.0	0.13	0.17	0.0	0.37	0.57	1.38	0.31	0.32	1.06
48	3.5566E-08	0.0	0.0	0.0	0.16	0.30	0.0	0.32	0.73	1.52	0.33	0.50	1.14
49	2.8251E-08	0.0	0.0	0.0	0.10	0.31	0.0	0.35	0.77	1.79	0.32	0.42	1.25
50	2.2441E-08	100.00	100.00	100.00	99.10	99.12	100.00	90.72	86.36	72.14	82.67	74.95	45.11

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4850.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	4.4156E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	3.4437E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
3	2.6858E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
4	2.0947E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.03	0.0
5	1.6336E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.02	0.0
6	1.2741E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.14	0.0
7	9.9366E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.38	0.0
8	7.7496E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.63	0.0
9	6.0439E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.81	0.18
10	4.7137E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.73	0.16
11	3.6762E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.96	0.81
12	2.8671E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	0.86	1.56
13	2.2361E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.98	2.34
14	1.7439E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.61	0.77	2.62
15	1.3601E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.88	2.52
16	1.0607E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.80	2.24
17	8.2728E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.66	2.20
18	6.4520E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.71	2.34
19	5.0319E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.45	0.75	1.86
20	3.9244E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.51	0.66	1.69
21	3.0607E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.03	0.0	0.42	0.74	1.73
22	2.3870E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.24	0.03	0.0	0.46	0.61	1.48
23	1.8617E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.33	0.13	0.0	0.55	0.66	1.49
24	1.4519E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.36	0.0	0.43	0.79	1.66
25	1.01324E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.49	0.0	0.56	0.74	1.35
26	8.8313E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.63	0.18	0.50	0.77	1.35
27	6.8875E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.75	0.18	0.48	0.76	1.50
28	5.3716E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.52	0.90	0.48	0.58	0.85	1.55
29	4.1894E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.75	1.41	0.52	0.80	1.61
30	3.2673E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.88	1.75	0.64	0.87	1.53
31	2.5482E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.90	2.20	0.61	0.77	1.56
32	1.9873E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.76	2.70	0.54	0.91	1.71
33	1.5499E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.46	0.81	2.25	0.61	0.80	1.82
34	1.2088E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.48	0.73	2.22	0.50	0.84	1.83
35	9.4275E-07	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.65	2.37	0.46	0.79	2.09
36	7.3525E-07	0.0	0.0	0.0	0.01	0.0	0.0	0.38	0.69	2.03	0.50	0.74	1.76
37	5.7343E-07	0.0	0.0	0.0	0.03	0.0	0.0	0.43	0.70	1.77	0.47	0.64	1.47
38	4.4722E-07	0.0	0.0	0.0	0.09	0.01	0.0	0.30	0.61	1.47	0.35	0.63	1.51
39	3.4879E-07	0.0	0.0	0.0	0.15	0.03	0.0	0.37	0.70	1.76	0.28	0.69	1.38
40	2.7202E-07	0.0	0.0	0.0	0.28	0.07	0.0	0.48	0.64	1.53	0.42	0.58	1.31
41	2.1215E-07	0.0	0.0	0.0	0.35	0.17	0.0	0.34	0.63	1.46	0.29	0.41	1.16
42	1.6546E-07	0.0	0.0	0.0	0.42	0.33	0.0	0.42	0.77	1.39	0.34	0.46	1.17
43	1.2904E-07	0.0	0.0	0.0	0.46	0.44	0.08	0.38	0.62	1.37	0.34	0.35	1.26
44	1.0064E-07	0.0	0.0	0.0	0.62	0.58	0.16	0.32	0.71	1.31	0.28	0.45	1.15
45	7.8489E-08	0.0	0.0	0.0	0.53	0.68	0.22	0.30	0.54	1.43	0.39	0.45	0.98
46	6.1214E-08	0.0	0.0	0.0	0.55	0.92	0.54	0.31	0.72	1.50	0.35	0.42	1.03
47	4.7741E-08	0.0	0.0	0.0	0.64	0.82	1.32	0.35	0.49	1.44	0.43	0.46	0.92
48	3.7234E-08	0.0	0.0	0.0	0.42	1.06	1.65	0.23	0.51	1.43	0.39	0.57	1.05
49	2.9039E-08	0.0	0.0	0.0	0.32	1.24	1.84	0.24	0.58	1.36	0.38	0.59	1.26
50	2.2647E-08	100.00	100.00	100.00	95.13	93.65	94.19	88.38	82.29	63.01	78.62	70.09	37.81

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 4950.00

MID-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.4156E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0
2 3.4437E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0
3 2.6858E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.27	0.0
4 2.0947E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	0.54	0.0
5 1.6336E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.70	0.87	0.0
6 1.2741E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.97	0.0
7 9.9366E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.67	1.08	0.22
8 7.7496E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.65	0.97	1.60
9 6.0439E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.64	1.05	2.37
10 4.7137E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.69	1.03	2.62
11 3.6762E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.52	1.04	3.08
12 2.8671E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.82	3.21
13 2.2361E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.80	2.69
14 1.7439E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.49	0.86	2.39
15 1.3601E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.84	2.39
16 1.0607E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.0	0.0	0.54	0.71	1.98
17 8.2728E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.29	0.0	0.0	0.50	0.75	1.72
18 6.4520E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.36	0.04	0.0	0.52	0.74	1.56
19 5.0319E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.30	0.0	0.47	0.79	1.60
20 3.9244E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.62	0.53	0.0	0.65	0.79	1.48
21 3.0607E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.77	0.0	0.51	0.81	1.55
22 2.3870E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.91	0.0	0.56	0.82	1.48
23 1.8617E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.55	1.04	0.31	0.69	0.81	1.39
24 1.4519E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.66	0.93	1.69	0.63	0.81	1.55
25 1.1324E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.54	1.01	1.85	0.63	0.91	1.44
26 8.8313E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.50	0.94	2.65	0.78	1.04	1.59
27 6.8875E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.65	1.01	3.09	0.58	1.07	1.73
28 5.3716E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.92	2.71	0.50	0.91	1.82
29 4.1894E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.72	2.84	0.68	0.90	1.96
30 3.2673E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.42	0.85	2.44	0.67	0.71	2.23
31 2.5482E-06	0.0	0.0	0.0	0.0	0.0	0.0	0.41	0.70	2.38	0.66	0.88	1.95
32 1.9873E-06	0.0	0.0	0.0	0.07	0.0	0.0	0.41	0.79	2.03	0.62	0.92	1.68
33 1.5499E-06	0.0	0.0	0.0	0.22	0.0	0.0	0.41	0.68	1.69	0.55	0.69	1.71
34 1.2088E-06	0.0	0.0	0.0	0.28	0.0	0.0	0.33	0.63	1.69	0.36	0.80	1.72
35 9.4275E-07	0.0	0.0	0.0	0.38	0.22	0.0	0.40	0.71	1.61	0.24	0.65	1.61
36 7.3525E-07	0.0	0.0	0.0	0.52	0.39	0.0	0.38	0.61	1.45	0.50	0.61	1.54
37 5.7343E-07	0.0	0.0	0.0	0.60	0.57	0.0	0.37	0.64	1.46	0.33	0.73	1.43
38 4.4722E-07	0.0	0.0	0.0	0.61	0.70	0.0	0.34	0.69	1.46	0.33	0.63	1.31
39 3.4879E-07	0.0	0.0	0.0	0.57	0.92	0.03	0.36	0.52	1.43	0.30	0.53	1.15
40 2.7202E-07	0.0	0.0	0.0	0.50	0.96	1.08	0.40	0.60	1.28	0.32	0.57	1.08
41 2.01215E-07	0.0	0.0	0.0	0.67	0.93	1.83	0.37	0.51	1.20	0.30	0.56	0.96
42 1.6546E-07	0.0	0.0	0.0	0.51	1.00	1.68	0.44	0.71	1.15	0.33	0.56	0.90
43 1.2904E-07	0.0	0.0	0.0	0.55	1.00	2.57	0.43	0.70	1.24	0.31	0.50	0.87
44 1.0064E-07	0.0	0.0	0.0	0.50	0.85	2.83	0.40	0.68	1.21	0.32	0.49	0.77
45 7.8489E-08	0.0	0.0	0.0	0.50	1.01	2.65	0.55	0.63	1.13	0.36	0.35	0.77
46 6.1214E-08	0.0	0.0	0.0	0.49	0.92	2.82	0.47	0.67	1.05	0.34	0.47	0.67
47 4.7741E-08	0.0	0.0	0.0	0.41	0.97	2.32	0.39	0.78	1.04	0.34	0.44	0.72
48 3.7234E-08	0.0	0.0	0.0	0.42	0.82	2.35	0.45	0.70	1.48	0.52	0.45	0.77
49 2.9039E-08	0.0	0.0	0.0	0.31	0.95	2.32	0.39	0.91	1.50	0.41	0.67	1.25
50 2.2647E-08	100.00	100.00	100.00	91.89	87.79	77.52	84.98	77.17	54.94	75.27	64.79	31.49

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5050.00

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5150.00

MID-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 1.7419E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0
2 1.3214E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.66	0.06	0.0
3 1.0024E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93	0.32	0.0
4 7.6038E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43	1.06	0.0
5 5.7681E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.11	1.54	0.20
6 4.3755E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.12	2.03	0.61
7 3.3192E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.94	1.72	1.01
8 2.5179E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.88	1.50	3.16
9 1.9100E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85	1.56	4.32
10 1.4489E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.83	1.31	5.48
11 1.0991E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.02	1.24	4.40
12 8.3374E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.93	1.38	3.78
13 6.3246E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.0	0.0	1.05	1.42	3.64
14 4.7977E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.57	0.07	0.0	1.04	1.51	3.42
15 3.6394E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.88	0.41	0.0	0.98	1.53	3.17
16 2.7608E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.99	0.86	0.0	1.03	1.51	3.81
17 2.0543E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.25	1.29	0.24	1.04	1.59	3.44
18 1.5887E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.72	0.59	0.97	1.56	3.22
19 1.2051E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.92	1.72	0.87	0.88	1.47	2.92
20 9.1418E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.91	1.53	2.61	1.03	1.41	2.77
21 6.9348E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.68	1.52	3.57	0.89	1.42	2.79
22 5.2606E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.60	1.38	4.53	0.89	1.45	2.63
23 3.9905E-05	0.0	0.0	0.0	0.0	0.0	0.0	0.76	1.19	4.77	0.82	1.35	2.66
24 3.0271E-05	0.0	0.0	0.0	0.06	0.0	0.0	0.67	1.14	4.41	0.86	1.22	2.27
25 2.2963E-05	0.0	0.0	0.0	0.21	0.0	0.0	0.61	1.15	3.53	1.14	1.12	2.24
26 1.7419E-05	0.0	0.0	0.0	0.39	0.0	0.0	0.60	1.24	3.65	1.04	1.43	2.44
27 1.3214E-05	0.0	0.0	0.0	0.64	0.26	0.0	0.58	1.19	3.03	0.95	1.17	2.31
28 1.0024E-05	0.0	0.0	0.0	0.81	0.53	0.0	0.78	0.92	2.94	0.85	1.29	1.99
29 7.6038E-06	0.0	0.0	0.0	0.88	0.91	0.05	0.72	1.09	2.72	0.75	1.22	1.69
30 5.7681E-06	0.0	0.0	0.0	1.16	1.19	0.44	0.75	1.23	2.82	0.73	1.00	1.51
31 4.3756E-06	0.0	0.0	0.0	0.94	1.57	0.60	0.59	0.95	2.42	0.73	1.03	1.55
32 3.3192E-06	0.0	0.0	0.0	0.88	1.76	1.34	0.69	1.01	2.41	0.61	0.94	1.43
33 2.5179E-06	0.0	0.0	0.0	0.85	1.51	2.78	0.83	1.17	2.26	0.60	0.87	1.41
34 1.9100E-06	0.0	0.0	0.0	0.73	1.48	3.45	0.72	1.09	2.06	0.64	0.92	1.51
35 1.4489E-06	0.0	0.0	0.0	0.58	1.26	4.20	0.66	1.23	2.00	0.45	0.77	1.35
36 1.0991E-06	0.01	0.0	0.0	0.57	1.21	4.39	0.82	1.24	2.00	0.46	0.80	1.33
37 8.3375E-07	0.11	0.0	0.0	0.58	1.14	4.39	0.68	0.97	1.80	0.53	0.70	0.97
38 6.3246E-07	0.24	0.0	0.0	0.64	1.16	3.93	0.67	1.16	1.82	0.39	0.78	0.68
39 4.7977E-07	0.39	0.07	0.0	0.42	1.23	3.48	0.59	1.04	1.56	0.52	0.72	0.75
40 3.6394E-07	0.63	0.35	0.0	0.51	1.10	3.01	0.54	1.10	1.73	0.42	0.70	0.66
41 2.7608E-07	0.76	0.54	0.0	0.45	0.95	2.82	0.59	1.08	2.04	0.46	0.65	0.79
42 2.0943E-07	0.82	0.84	0.14	0.53	0.91	2.63	0.80	1.09	1.91	0.47	0.59	0.67
43 1.5887E-07	1.08	1.04	0.41	0.56	1.17	2.72	0.75	1.15	1.76	0.50	0.59	0.68
44 1.2051E-07	1.00	1.36	0.85	0.50	0.88	2.48	0.72	1.01	1.59	0.60	0.56	0.62
45 9.1419E-08	1.01	1.61	1.29	0.64	0.75	2.39	0.91	1.11	1.47	0.45	0.61	0.50
46 6.9349E-08	0.93	1.71	2.38	0.59	1.09	1.89	0.81	0.99	1.85	0.48	0.59	0.58
47 5.2607E-08	0.70	1.64	3.27	0.58	1.01	1.79	0.87	1.04	1.58	0.43	0.61	0.46
48 3.9906E-08	0.71	1.66	3.63	0.60	1.23	1.77	0.79	1.09	1.68	0.37	0.66	0.56
49 3.0272E-08	0.48	1.70	4.24	0.38	1.18	1.96	0.58	1.01	1.62	0.30	0.57	0.57
50 2.2964E-08	91.13	87.48	83.79	84.32	74.52	47.49	72.79	59.82	24.16	62.80	47.95	11.05

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5250.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	PER GM OF CO	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	4.3151E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0
2	3.2139E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.05	0.0
3	2.3937E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87	0.15	0.0
4	1.7829E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05	0.59	0.0
5	1.3279E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.49	1.43	0.12
6	9.8900E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.33	1.75	0.24
7	7.3661E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.46	2.17	0.90
8	5.4863E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.56	2.02	2.99
9	4.0862E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43	2.23	5.09
10	3.0434E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	1.75	2.24	5.42
11	2.2668E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	1.60	2.52	5.19
12	1.6683E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.04	0.0	1.42	2.61	5.89
13	1.2574E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.68	0.14	0.0	1.37	2.29	5.56
14	9.3654E-04	0.0	0.0	0.0	0.0	0.0	0.0	0.91	0.51	0.0	1.67	2.17	5.58
15	6.9754E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.20	1.11	0.11	1.42	2.15	5.40
16	5.1953E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.24	1.39	0.24	1.28	2.30	5.55
17	3.8695E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.07	1.76	0.41	1.41	2.03	4.36
18	2.8820E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.08	2.01	2.37	1.29	1.88	3.74
19	2.1465E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.19	1.64	3.57	1.16	1.85	3.58
20	1.5987E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.07	1.69	4.82	1.11	1.72	3.11
21	1.1907E-04	0.0	0.0	0.0	0.08	0.0	0.0	1.25	1.89	4.81	1.12	1.76	2.76
22	8.8687E-05	0.0	0.0	0.0	0.21	0.0	0.0	1.15	1.81	5.22	1.05	1.57	2.36
23	6.6054E-05	0.0	0.0	0.0	0.50	0.10	0.0	0.99	2.16	4.32	1.02	1.58	2.17
24	4.9197E-05	0.0	0.0	0.0	0.67	0.28	0.0	1.12	1.72	4.23	1.07	1.30	2.08
25	3.6642E-05	0.0	0.0	0.0	0.83	0.64	0.0	1.12	1.78	4.47	0.99	1.36	1.93
26	2.7291E-05	0.0	0.0	0.0	1.04	1.05	0.14	1.06	1.76	4.94	0.93	1.19	2.02
27	2.0327E-05	0.0	0.0	0.0	1.06	1.40	0.36	1.13	1.91	4.82	0.96	1.16	1.79
28	1.5139E-05	0.0	0.0	0.0	1.11	1.57	0.67	1.04	1.77	3.87	0.97	1.12	1.68
29	1.1276E-05	0.0	0.0	0.0	0.96	1.72	2.76	0.94	1.82	3.52	0.94	1.09	1.59
30	8.3983E-06	0.0	0.0	0.0	0.97	1.83	3.27	1.16	1.55	3.22	0.84	1.04	1.39
31	6.2550E-06	0.02	0.0	0.0	0.97	1.46	4.47	0.99	1.55	3.16	0.90	0.92	1.38
32	4.6588E-06	0.12	0.0	0.0	0.81	1.45	4.54	0.98	1.52	2.62	0.83	1.08	1.36
33	3.4699E-06	0.26	0.0	0.0	0.99	1.70	4.74	0.87	1.61	2.55	0.90	1.31	1.13
34	2.5844E-06	0.50	0.15	0.0	0.92	1.60	4.47	0.97	1.35	2.36	0.57	1.14	0.94
35	1.9248E-06	0.50	0.35	0.0	0.84	1.74	4.17	0.85	1.60	2.00	0.66	1.00	0.98
36	1.4336E-06	0.85	0.57	0.0	0.93	1.58	3.60	0.80	1.35	1.86	0.54	0.94	0.64
37	1.0678E-06	0.93	0.95	0.33	0.76	1.60	3.85	0.80	1.16	1.82	0.59	0.72	0.73
38	7.9528E-07	0.99	1.22	0.24	0.90	1.51	3.90	0.67	1.22	1.62	0.61	0.81	0.54
39	5.9233E-07	1.10	1.47	0.92	0.84	1.49	4.04	0.79	1.17	1.91	0.40	0.70	0.59
40	4.4117E-07	0.93	1.44	2.27	0.85	1.51	3.48	0.77	1.13	1.83	0.48	0.52	0.51
41	3.2858E-07	0.81	1.74	3.13	0.78	1.43	3.00	0.77	0.89	1.69	0.48	0.65	0.42
42	2.4473E-07	0.78	1.71	3.64	0.92	1.48	2.86	0.71	0.83	1.40	0.48	0.53	0.44
43	1.8228E-07	0.93	1.48	4.44	0.76	1.45	2.56	0.74	0.95	1.43	0.51	0.62	0.51
44	1.3576E-07	0.87	1.35	4.66	0.81	1.41	2.33	0.85	0.98	1.34	0.41	0.51	0.39
45	1.0111E-07	0.84	1.44	4.02	0.87	1.43	2.32	0.76	1.09	1.00	0.45	0.50	0.36
46	7.5310E-08	0.73	1.83	4.43	0.87	1.35	2.11	0.81	1.22	1.04	0.41	0.61	0.38
47	5.6091E-08	0.86	1.82	3.73	0.84	1.41	2.09	0.85	1.23	0.97	0.48	0.62	0.36
48	4.1777E-08	0.82	1.65	3.46	0.75	1.24	1.89	0.84	1.21	1.14	0.50	0.65	0.33
49	3.1116E-08	0.77	1.81	3.70	0.72	1.64	2.22	0.89	1.22	1.16	0.63	0.79	0.38
50	2.3175E-08	86.39	79.02	61.03	76.44	62.93	30.16	64.42	48.26	12.16	54.26	38.06	5.14

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5350.00

MID-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 8.5706E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
2 6.2955E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	0.0	0.0
3 4.6244E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.84	0.13	0.0
4 3.3968E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.48	0.72	0.0
5 2.4951E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.43	1.91	0.03
6 1.8328E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.96	1.92	0.58
7 1.3463E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.36	2.65	1.56
8 9.8891E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.23	3.05	4.54
9 7.2640E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.11	3.32	6.10
10 5.3358E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.17	0.0	0.0	2.05	3.15	6.42
11 3.9194E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.0	0.0	1.86	3.15	7.06
12 2.8790E-03	0.0	0.0	0.0	0.0	0.0	0.0	0.85	0.42	0.0	1.85	2.83	7.48
13 2.1147E-03	0.0	0.0	0.0	0.0	0.0	0.0	1.14	0.81	0.0	1.83	2.74	7.25
14 1.5534E-03	0.0	0.0	0.0	0.0	0.0	0.0	1.08	1.59	0.13	1.40	2.61	6.53
15 1.1410E-03	0.0	0.0	0.0	0.0	0.0	0.0	1.26	1.79	0.66	1.52	2.50	6.32
16 8.3815E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.37	1.61	1.55	1.55	2.40	4.99
17 6.1566E-04	0.0	0.0	0.0	0.0	0.0	0.0	1.49	2.01	3.66	1.30	2.24	3.76
18 4.5223E-04	0.0	0.0	0.0	0.03	0.0	0.0	1.90	2.30	5.53	1.44	2.15	3.55
19 3.3219E-04	0.0	0.0	0.0	0.27	0.0	0.0	1.82	2.71	5.01	1.34	1.84	2.69
20 2.4401E-04	0.0	0.0	0.0	0.46	0.04	0.0	1.56	2.65	4.84	1.64	1.74	2.47
21 1.7924E-04	0.0	0.0	0.0	0.71	0.41	0.0	1.53	2.66	5.98	1.26	1.70	2.68
22 1.3166E-04	0.0	0.0	0.0	1.02	0.71	0.0	1.48	2.58	6.17	1.34	1.60	2.28
23 9.6709E-05	0.0	0.0	0.0	0.94	1.17	0.15	1.38	2.29	6.11	1.11	1.68	1.87
24 7.1037E-05	0.0	0.0	0.0	0.93	1.59	0.69	1.36	2.28	5.62	1.08	1.34	1.84
25 5.2180E-05	0.0	0.0	0.0	1.14	1.66	1.28	1.22	2.05	5.26	1.13	1.36	1.61
26 3.8329E-05	0.0	0.0	0.0	0.91	1.29	2.94	1.18	2.03	4.15	0.95	1.32	1.39
27 2.8155E-05	0.06	0.0	0.0	1.39	1.79	3.83	1.23	2.15	4.57	1.06	1.26	1.38
28 2.0681E-05	0.24	0.0	0.0	1.28	1.78	5.00	1.10	1.91	4.02	0.91	1.19	1.16
29 1.5191E-05	0.37	0.03	0.0	1.31	2.02	4.40	1.12	2.04	3.05	0.90	1.22	1.11
30 1.1159E-05	0.52	0.36	0.0	1.20	2.33	4.22	1.05	1.66	3.01	0.80	1.15	1.13
31 8.1966E-06	0.80	0.54	0.0	1.49	2.17	4.81	0.96	1.65	2.31	0.79	0.92	0.84
32 6.0208E-06	0.93	0.83	0.01	1.31	2.28	4.99	1.09	1.56	1.94	0.87	0.95	0.73
33 4.4226E-06	0.87	1.23	0.65	1.12	2.12	5.44	1.01	1.41	1.63	0.65	1.04	0.71
34 3.2486E-06	0.81	1.46	1.18	1.33	2.25	4.93	1.10	1.40	1.67	0.83	0.77	0.63
35 2.3862E-06	0.98	1.55	1.74	1.01	1.92	4.70	0.88	1.31	1.67	0.60	0.86	0.47
36 1.7528E-06	0.97	1.28	2.94	1.11	1.88	4.53	1.04	1.19	1.69	0.77	0.67	0.48
37 1.2875E-06	0.82	1.71	4.20	0.93	1.82	3.67	0.91	1.06	1.21	0.51	0.84	0.62
38 9.4575E-07	1.09	1.65	4.23	1.00	1.82	3.62	0.90	1.21	1.25	0.49	0.62	0.46
39 6.9470E-07	1.17	1.55	4.25	0.89	1.85	3.13	0.86	1.18	1.23	0.48	0.64	0.44
40 5.1029E-07	1.02	1.75	3.93	0.98	1.57	3.18	0.69	1.07	1.24	0.50	0.64	0.40
41 3.7483E-07	1.00	1.71	4.04	0.92	1.72	2.70	0.85	1.14	0.96	0.47	0.54	0.28
42 2.7533E-07	1.11	2.21	4.64	0.90	1.48	2.52	0.72	1.06	0.86	0.50	0.54	0.30
43 2.0225E-07	1.16	1.75	4.37	0.93	1.38	2.34	0.66	1.04	0.72	0.45	0.46	0.31
44 1.4856E-07	1.09	2.12	4.18	0.92	1.28	2.10	0.83	1.01	0.81	0.45	0.46	0.25
45 1.0913E-07	1.03	2.19	4.51	0.83	1.25	1.80	0.84	1.07	0.75	0.38	0.62	0.25
46 8.0158E-08	1.17	1.95	3.83	0.77	1.36	1.30	0.88	1.16	0.73	0.44	0.67	0.27
47 5.8880E-08	1.09	1.99	3.81	0.78	1.18	1.12	0.91	1.07	0.66	0.52	0.65	0.26
48 4.3250E-08	1.10	1.89	3.62	0.95	1.50	1.14	0.93	1.05	0.69	0.53	0.62	0.23
49 3.1769E-08	0.89	2.00	3.78	0.94	1.66	1.38	0.90	1.03	0.75	0.66	0.59	0.23
50 2.3336E-08	79.71	68.25	40.09	69.30	52.72	18.09	57.17	39.79	7.91	48.09	32.03	4.06

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5450.00

MID-POINT ABSORP COEFR	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	
PER GM OF CO													
1	1.7023E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	
2	1.2332E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.0	0.0	
3	8.9336E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.12	0.0	
4	6.4719E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.44	0.80	0.0	
5	4.6884E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.56	1.58	0.0	
6	3.3965E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.90	2.66	0.49	
7	2.4605E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.84	2.54	2.31	
8	1.7825E-02	0.0	0.0	0.0	0.0	0.0	0.05	0.0	0.0	1.78	2.40	4.22	
9	1.2913E-02	0.0	0.0	0.0	0.0	0.0	0.32	0.0	0.0	1.76	2.56	6.70	
10	9.3547E-03	0.0	0.0	0.0	0.0	0.0	0.62	0.17	0.0	1.90	2.75	6.45	
11	6.7769E-03	0.0	0.0	0.0	0.0	0.0	0.95	0.54	0.0	1.53	2.45	6.82	
12	4.9094E-03	0.0	0.0	0.0	0.0	0.0	1.18	1.04	0.0	1.53	2.34	5.69	
13	3.5566E-03	0.0	0.0	0.0	0.0	0.0	1.25	1.88	0.21	1.60	2.61	5.83	
14	2.5765E-03	0.0	0.0	0.0	0.0	0.0	1.32	1.78	1.33	1.53	2.51	5.18	
15	1.8665E-03	0.0	0.0	0.0	0.06	0.0	1.52	1.89	3.04	1.45	2.38	3.83	
16	1.3522E-03	0.0	0.0	0.0	0.19	0.0	1.34	2.57	4.58	1.40	2.28	4.35	
17	9.7956E-04	0.0	0.0	0.0	0.40	0.05	1.45	1.97	5.13	1.36	2.01	4.29	
18	7.0563E-04	0.0	0.0	0.0	0.67	0.39	1.29	2.08	5.37	1.31	1.96	3.70	
19	5.1408E-04	0.0	0.0	0.0	0.87	0.68	1.44	1.79	6.03	1.33	1.66	3.36	
20	3.7242E-04	0.0	0.0	0.0	1.17	1.08	1.32	2.17	5.90	1.23	1.52	3.30	
21	2.6679E-04	0.0	0.0	0.0	1.01	1.60	1.10	2.20	4.69	1.42	1.44	2.59	
22	1.9545E-04	0.0	0.0	0.0	0.97	1.68	1.21	2.26	3.90	1.24	1.38	2.63	
23	1.4159E-04	0.12	0.0	0.0	1.05	1.62	1.05	1.86	3.78	1.15	1.62	2.26	
24	1.0257E-04	0.27	0.0	0.0	1.18	1.64	1.17	2.17	4.17	1.04	1.50	2.07	
25	7.4307E-05	0.46	0.14	0.0	1.29	1.80	1.19	1.96	3.89	1.03	1.57	2.26	
26	5.3831E-05	0.59	0.48	0.0	1.13	2.14	1.07	1.86	3.20	1.13	1.57	2.09	
27	3.8997E-05	0.80	0.63	0.0	1.14	1.87	1.02	1.65	3.23	0.99	1.45	1.61	
28	2.8251E-05	0.95	1.02	0.15	1.04	1.80	0.99	1.59	2.93	0.89	1.44	1.34	
29	2.0466E-05	1.06	1.25	0.83	0.99	1.77	0.92	1.33	3.28	0.85	1.38	1.23	
30	1.4826E-05	0.91	1.69	2.06	1.16	1.66	0.97	1.31	2.47	0.77	1.20	1.04	
31	1.0741E-05	0.91	1.61	2.46	0.93	1.76	0.93	1.17	2.37	0.69	1.09	1.00	
32	7.7810E-06	0.90	1.54	3.21	0.87	2.04	1.00	1.23	2.31	0.58	0.94	0.95	
33	5.6368E-06	0.92	1.30	4.20	0.99	1.80	0.88	1.12	2.04	0.62	0.89	0.78	
34	4.0835E-06	0.97	1.70	5.15	0.80	1.73	0.89	1.20	1.93	0.70	0.75	0.95	
35	2.9582E-06	1.10	1.64	4.42	0.70	1.39	0.92	1.14	1.52	0.61	0.76	0.84	
36	2.1431E-06	1.02	1.73	4.55	0.82	1.50	0.88	1.33	1.58	0.62	0.63	0.80	
37	1.5525E-06	0.93	1.80	3.87	0.94	1.35	0.92	1.44	1.45	0.51	0.66	0.74	
38	1.1247E-06	0.78	1.82	3.95	0.84	1.38	0.98	1.50	1.40	0.53	0.58	0.57	
39	8.1477E-07	0.78	1.62	3.19	0.72	1.11	0.96	1.28	1.09	0.51	0.59	0.55	
40	5.9025E-07	0.88	1.67	4.27	0.85	1.19	0.82	1.21	0.96	0.45	0.69	0.39	
41	4.2760E-07	0.79	1.60	3.61	0.71	1.08	1.83	0.69	1.18	0.45	0.77	0.42	
42	3.0977E-07	0.77	1.53	2.86	0.72	1.21	0.87	1.04	1.15	0.49	0.63	0.46	
43	2.2441E-07	0.67	1.57	2.75	0.69	1.16	1.64	0.65	1.04	0.46	0.69	0.30	
44	1.6257E-07	0.80	1.24	2.84	0.80	1.12	1.59	0.67	0.97	0.79	0.49	0.62	0.29
45	1.1777E-07	0.66	1.40	2.65	0.92	1.23	1.36	0.55	0.95	0.63	0.48	0.72	0.31
46	8.5318E-08	0.57	1.39	2.45	0.83	1.09	1.68	0.57	0.69	0.74	0.49	0.61	0.25
47	6.1807E-08	0.69	1.14	2.56	0.75	1.31	1.32	0.53	0.74	0.85	0.53	0.63	0.27
48	4.4776E-08	0.75	1.20	2.24	0.87	1.39	1.18	0.53	0.73	0.80	0.59	0.61	0.31
49	3.2437E-08	0.77	1.53	2.79	1.04	1.50	1.38	0.72	0.83	0.90	0.72	0.69	0.26
50	2.3498E-08	79.18	65.76	32.94	69.89	53.88	18.21	60.30	43.14	8.07	51.47	34.77	3.92

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5550.00

PER GM OF CO	MID-POINT ABSORP_COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	4.2169E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	2.9954E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0
3	2.1334E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.27	0.06	0.0
4	1.5174E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.87	0.13	0.0
5	1.0793E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.52	0.93	0.12
6	7.6771E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.40	1.74	0.11
7	5.4606E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.27	2.32	0.48
8	3.8840E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.0	0.0	2.41	2.71	2.79
9	2.7626E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.44	0.04	0.0	2.12	3.65	4.94
10	1.9650E-02	0.0	0.0	0.0	0.0	0.0	0.0	0.92	0.31	0.0	2.04	3.44	7.35
11	1.3577E-02	0.0	0.0	0.0	0.0	0.0	0.0	1.15	0.93	0.0	2.04	3.12	7.24
12	9.9413E-03	0.0	0.0	0.0	0.0	0.0	0.0	1.29	1.56	0.17	1.94	3.20	8.91
13	7.0711E-03	0.0	0.0	0.0	0.01	0.0	0.0	1.11	2.02	0.56	1.79	2.81	6.98
14	5.0295E-03	0.0	0.0	0.0	0.16	0.0	0.0	1.39	1.98	2.62	1.74	2.54	6.59
15	3.5774E-03	0.0	0.0	0.0	0.42	0.0	0.0	1.66	1.80	4.34	1.74	2.40	5.86
16	2.5445E-03	0.0	0.0	0.0	0.73	0.32	0.0	1.74	2.32	5.65	1.73	2.34	5.80
17	1.8099E-03	0.0	0.0	0.0	0.86	0.76	0.0	1.72	2.76	6.17	1.39	2.35	5.06
18	1.4287E-03	0.0	0.0	0.0	1.22	1.19	0.0	1.68	2.86	5.32	1.36	2.45	4.20
19	9.1566E-04	0.01	0.0	0.0	1.21	1.48	0.56	1.37	2.65	6.10	1.36	2.13	3.09
20	6.5129E-04	0.14	0.0	0.0	0.95	2.07	1.68	1.50	2.57	6.11	1.38	2.15	2.89
21	4.6325E-04	0.35	0.0	0.0	1.06	1.87	3.71	1.44	2.31	5.64	1.35	1.92	2.52
22	3.2950E-04	0.52	0.20	0.0	0.98	1.59	4.37	1.28	2.25	4.95	1.36	1.67	2.13
23	2.3437E-04	0.77	0.50	0.0	1.30	1.72	5.47	1.43	2.22	5.54	1.27	1.51	1.94
24	1.6670E-04	0.81	0.94	0.0	1.29	1.70	6.20	1.31	2.10	4.99	1.07	1.41	1.65
25	1.1857E-04	1.19	1.24	0.15	1.47	2.30	4.39	1.13	1.90	3.35	0.87	1.23	1.45
26	8.4338E-05	1.03	1.51	1.48	1.30	2.30	3.69	1.08	1.76	3.64	0.92	1.20	1.17
27	5.9988E-05	0.84	1.73	2.39	1.22	2.38	5.18	0.98	1.72	3.37	0.98	1.11	1.28
28	4.2668E-05	0.93	1.94	3.67	1.26	2.19	4.50	1.04	1.84	2.62	0.99	1.12	1.11
29	3.0349E-05	0.80	1.58	4.44	1.11	2.10	4.97	1.12	1.60	2.30	0.82	0.92	0.94
30	2.1587E-05	0.89	1.51	5.11	1.07	2.18	5.09	1.01	1.77	2.16	0.91	0.83	0.81
31	1.5354E-05	0.82	1.54	5.71	0.91	1.93	4.62	1.01	1.34	1.93	0.76	1.02	0.63
32	1.0921E-05	1.29	1.54	4.12	1.04	1.72	4.02	1.04	1.42	1.68	0.80	1.01	0.60
33	7.7680E-06	0.98	1.53	3.29	1.00	1.74	2.97	0.99	1.34	1.62	0.74	1.03	0.66
34	5.5253E-06	1.16	2.21	3.48	0.99	1.53	3.13	0.87	1.25	1.32	0.69	0.95	0.67
35	3.9300E-06	1.09	1.91	4.56	0.84	1.47	2.47	0.84	1.21	1.11	0.75	0.87	0.51
36	2.7954E-06	0.94	2.06	3.89	0.86	1.40	2.31	1.06	1.15	1.12	0.63	0.75	0.42
37	1.9883E-06	1.05	1.96	4.00	0.85	1.31	2.15	0.81	0.86	0.85	0.66	0.78	0.41
38	1.4142E-06	0.85	1.92	4.77	0.71	1.36	2.07	0.79	0.97	0.77	0.57	0.63	0.32
39	1.0059E-06	0.99	1.62	4.23	0.80	1.48	2.11	0.76	1.05	0.77	0.61	0.66	0.35
40	7.1549E-07	0.75	1.65	3.34	0.95	1.22	1.78	0.82	0.87	0.83	0.50	0.54	0.34
41	5.0891E-07	0.70	1.56	3.13	0.92	1.40	1.77	0.60	0.90	0.77	0.50	0.55	0.35
42	3.6198E-07	0.78	1.52	2.39	0.90	1.12	1.47	0.64	0.80	0.69	0.59	0.63	0.31
43	2.5747E-07	0.87	1.27	2.20	0.83	1.22	1.28	0.56	0.98	0.55	0.45	0.60	0.22
44	1.8313E-07	0.80	1.27	2.01	0.90	1.22	0.91	0.66	0.95	0.55	0.50	0.49	0.27
45	1.3026E-07	0.84	1.23	2.34	0.87	1.19	1.04	0.65	0.89	0.44	0.42	0.53	0.28
46	9.2652E-08	0.83	1.16	1.83	0.75	1.19	0.80	0.73	0.74	0.52	0.51	0.52	0.23
47	6.5901E-08	0.74	1.26	1.54	0.74	1.20	0.74	0.72	1.00	0.53	0.45	0.48	0.27
48	4.6874E-08	0.64	1.54	1.76	0.68	1.09	0.82	0.86	0.90	0.48	0.45	0.56	0.34
49	3.3341E-08	0.61	1.57	1.58	0.80	1.00	0.76	0.66	1.08	0.42	0.59	0.59	0.28
50	2.3715E-08	74.99	58.43	22.59	66.04	48.06	12.97	56.99	39.03	7.45	48.68	33.42	5.13

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5650.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	
PER GM OF CO													
1	8.3755E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	5.8753E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	
3	4.1215E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.0	0.0	
4	2.8912E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.97	0.17	0.0	
5	2.0281E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.30	0.86	0.0	
6	1.4227E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.98	1.91	0.23	
7	9.9801E-02	0.0	0.0	0.0	0.0	0.0	0.09	0.0	0.0	2.84	2.77	0.87	
8	7.0009E-02	0.0	0.0	0.0	0.0	0.0	0.49	0.03	0.0	2.68	3.26	2.78	
9	4.9111E-02	0.0	0.0	0.0	0.0	0.0	0.91	0.30	0.0	2.42	4.11	6.74	
10	3.4451E-02	0.0	0.0	0.0	0.0	0.0	1.13	1.10	0.0	2.24	3.87	7.75	
11	2.4167E-02	0.0	0.0	0.0	0.01	0.0	1.33	1.68	0.34	2.12	3.63	7.65	
12	1.6953E-02	0.0	0.0	0.0	0.18	0.0	1.46	1.85	0.93	2.31	3.25	9.41	
13	1.1892E-02	0.0	0.0	0.0	0.48	0.07	1.81	2.41	2.63	1.84	3.24	9.10	
14	8.3422E-03	0.0	0.0	0.0	0.78	0.32	2.03	2.39	5.33	1.82	2.86	7.58	
15	5.8519E-03	0.0	0.0	0.0	1.04	0.94	2.08	2.78	5.38	1.70	2.66	5.72	
16	4.1051E-03	0.03	0.0	0.0	0.97	1.48	1.77	3.19	7.34	1.39	2.51	5.81	
17	2.8797E-03	0.22	0.0	0.0	1.16	1.59	0.79	1.69	3.24	6.50	1.45	2.31	4.51
18	2.0201E-03	0.41	0.09	0.0	1.29	1.73	1.78	2.90	6.62	1.57	2.18	3.27	
19	1.4170E-03	0.63	0.30	0.0	1.30	2.11	3.97	1.55	2.75	6.73	1.46	1.78	3.42
20	9.9404E-04	0.87	0.71	0.0	1.21	2.12	5.27	1.50	2.74	6.28	1.36	1.59	2.81
21	6.9731E-04	0.86	1.18	0.38	1.55	1.90	4.73	1.44	2.55	5.98	1.44	1.50	2.55
22	4.8915E-04	0.95	1.46	0.53	1.56	2.23	6.12	1.30	2.42	5.45	1.27	1.71	2.36
23	3.4314E-04	1.17	1.50	2.12	1.52	2.72	5.64	1.22	2.03	5.04	1.15	1.55	1.65
24	2.4071E-04	0.84	1.78	2.90	1.45	2.74	5.36	1.19	1.93	3.91	1.11	1.64	1.62
25	1.6885E-04	1.17	1.80	4.56	1.35	2.56	5.47	1.07	1.84	3.53	0.99	1.57	1.56
26	1.1845E-04	0.90	1.56	4.98	1.28	2.40	5.28	1.04	1.59	3.20	0.93	1.50	1.52
27	8.3090E-05	1.07	2.05	4.41	1.17	2.27	4.85	1.03	1.72	2.63	0.92	1.24	1.34
28	5.8287E-05	1.13	1.86	5.38	1.11	2.15	5.04	1.14	1.54	2.16	0.88	1.23	1.24
29	4.0887E-05	1.32	1.94	4.32	1.10	1.94	4.42	1.21	1.59	1.87	0.95	1.17	0.91
30	2.8682E-05	1.21	1.98	4.51	1.05	1.86	4.19	1.12	1.18	1.73	0.80	0.95	1.03
31	2.0120E-05	1.24	2.33	4.95	0.97	1.67	4.07	1.13	1.27	1.77	0.97	1.00	0.70
32	1.4114E-05	1.07	2.30	4.91	1.09	1.70	3.34	0.84	1.15	1.49	0.85	1.14	0.67
33	9.9009E-06	1.17	2.09	4.04	0.98	1.81	2.93	1.01	1.38	1.28	0.80	1.06	0.54
34	6.9453E-06	0.96	1.95	4.52	0.95	1.78	2.42	0.80	1.28	0.94	0.78	1.03	0.62
35	4.8721E-06	0.97	1.93	4.09	0.92	1.56	2.22	0.82	1.16	0.92	0.63	0.73	0.39
36	3.4177E-06	0.90	1.64	3.47	0.80	1.45	1.99	0.69	1.12	0.85	0.53	0.86	0.35
37	2.3975E-06	0.85	1.66	3.50	0.90	1.21	1.76	0.86	1.44	1.03	0.67	0.85	0.25
38	1.6818E-06	0.87	1.48	3.52	0.91	1.19	1.54	0.67	1.13	0.90	0.63	0.78	0.40
39	1.1798E-06	0.83	1.68	3.26	0.91	1.01	1.37	0.67	0.94	0.76	0.49	0.77	0.30
40	8.2760E-07	0.92	1.59	2.86	0.79	1.06	1.31	0.70	0.83	0.77	0.51	0.83	0.28
41	5.8055E-07	0.92	1.56	2.31	0.86	1.09	1.29	0.85	0.97	0.75	0.55	0.76	0.28
42	4.0725E-07	0.97	1.47	2.11	0.82	1.16	0.94	0.68	0.89	0.56	0.48	0.71	0.13
43	2.8568E-07	0.81	1.58	2.02	0.75	1.04	0.97	0.74	0.75	0.51	0.45	0.68	0.26
44	2.0040E-07	0.93	1.38	1.66	0.70	1.13	0.79	0.74	0.75	0.44	0.45	0.68	0.17
45	1.4058E-07	0.69	1.36	1.60	0.82	1.04	0.90	0.76	1.00	0.32	0.58	0.59	0.12
46	9.8616E-08	0.80	1.16	1.57	0.76	1.24	0.58	0.67	0.96	0.33	0.66	0.59	0.13
47	6.9178E-08	0.74	1.11	1.20	0.72	1.06	0.62	0.53	0.87	0.28	0.85	0.57	0.08
48	4.8527E-08	0.81	1.13	1.34	0.76	1.22	0.64	0.76	0.99	0.28	1.31	0.76	0.04
49	3.4041E-08	1.08	1.24	1.36	0.66	1.29	0.72	0.82	1.06	0.45	2.43	0.90	0.07
50	2.3880E-08	69.69	51.15	11.62	62.37	42.16	5.66	53.88	34.31	1.79	43.36	27.69	0.79

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5750.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 8.3755E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0
2 5.8753E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
3 4.1215E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.22	0.17	0.0
4 2.8912E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.04	1.35	0.0
5 2.0281E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.18	0.0	0.0	2.07	2.59	0.44
6 1.4227E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	2.14	3.24	1.16
7 9.9801E-02	0.0	0.0	0.0	0.0	0.0	0.0	1.12	0.47	0.0	2.21	3.13	3.83
8 7.0009E-02	0.0	0.0	0.0	0.02	0.0	0.0	1.01	1.29	0.0	1.97	3.09	7.27
9 4.9111E-02	0.0	0.0	0.0	0.29	0.0	0.0	1.33	1.75	0.14	2.00	3.24	8.73
10 3.4451E-02	0.0	0.0	0.0	0.55	0.04	0.0	1.88	1.96	1.79	1.89	3.04	8.09
11 2.4167E-02	0.0	0.0	0.0	0.91	0.51	0.0	1.70	2.50	3.60	1.81	2.62	7.22
12 1.6953E-02	0.07	0.0	0.0	0.99	1.09	0.0	1.56	2.76	4.91	1.70	2.85	6.51
13 1.1892E-02	0.27	0.0	0.0	0.99	1.45	0.13	1.65	2.61	5.74	1.63	2.31	5.73
14 8.3422E-03	0.44	0.06	0.0	1.03	1.59	1.31	1.51	2.53	6.89	1.43	2.57	5.06
15 5.8519E-03	0.74	0.39	0.0	1.25	1.75	3.26	1.48	2.38	6.73	1.32	2.41	4.32
16 4.1051E-03	0.95	0.78	0.0	1.43	1.91	4.29	1.61	2.51	6.33	1.51	2.10	3.64
17 2.8797E-03	0.87	1.32	0.07	1.45	1.95	4.60	1.19	2.48	5.24	1.23	2.15	3.24
18 2.0201E-03	0.82	1.43	0.96	1.39	2.36	4.62	1.29	2.33	5.23	1.60	1.83	3.27
19 1.4170E-03	0.94	1.50	2.58	1.20	2.36	5.36	1.34	2.10	5.17	1.15	1.59	2.67
20 9.9404E-04	0.87	1.61	3.54	1.17	2.27	5.48	1.11	2.10	4.04	1.22	1.50	2.21
21 6.9731E-04	1.14	1.58	4.05	1.14	2.03	5.76	1.06	1.68	3.82	1.10	1.56	2.02
22 4.8915E-04	1.13	1.43	4.61	1.03	2.00	5.22	1.07	2.06	3.28	1.09	1.51	1.60
23 3.4314E-04	1.07	1.91	3.79	0.98	2.03	4.82	1.01	1.79	2.78	1.22	1.30	2.09
24 2.4071E-04	1.20	2.05	5.40	0.99	1.89	4.05	0.98	1.42	2.55	1.12	1.27	1.71
25 1.6685E-04	1.03	1.92	4.32	0.94	2.08	3.93	0.86	1.54	2.37	1.02	1.42	1.68
26 1.1845E-04	1.00	1.98	3.78	1.11	1.65	3.46	1.01	1.30	1.87	1.01	1.33	1.49
27 8.3090E-05	0.77	1.95	5.09	0.92	1.64	3.29	1.01	1.36	1.76	0.92	1.35	1.37
28 5.8287E-05	0.86	1.95	4.28	0.96	1.49	2.81	0.88	1.25	1.93	0.86	1.20	1.06
29 4.0887E-05	0.81	1.60	4.43	0.81	1.55	3.17	1.02	1.21	1.53	0.99	1.23	0.87
30 2.8662E-05	0.69	1.76	3.67	0.81	1.41	2.47	0.88	1.22	1.50	0.85	0.99	0.77
31 2.0120E-05	0.82	1.46	3.39	0.84	1.36	2.08	0.93	1.24	1.27	0.74	0.86	0.57
32 1.4114E-05	0.77	1.55	2.76	0.66	1.47	2.02	0.99	1.35	1.36	0.62	0.76	0.77
33 9.9009E-06	0.78	1.52	2.72	0.77	1.14	1.56	0.87	1.26	1.24	0.54	0.82	0.61
34 6.9453E-06	0.79	1.46	2.76	0.73	1.13	1.53	0.94	1.14	1.54	0.58	0.67	0.59
35 4.8721E-06	0.89	1.33	2.55	0.84	1.04	1.45	0.93	1.16	1.09	0.58	0.60	0.47
36 3.4177E-06	0.71	1.23	2.36	0.80	1.23	1.30	0.73	0.93	0.97	0.54	0.73	0.67
37 2.3975E-06	0.86	1.37	2.24	0.71	1.14	1.58	0.76	0.97	0.84	0.57	0.60	0.53
38 1.6818E-06	0.60	1.13	2.01	0.79	0.99	1.30	0.79	1.00	0.87	0.48	0.71	0.41
39 1.1798E-06	0.74	1.18	1.92	0.75	1.26	1.06	0.71	0.89	0.71	0.47	0.73	0.62
40 8.2760E-07	0.63	1.19	1.59	0.73	0.91	1.11	0.74	0.86	0.61	0.54	0.71	0.46
41 5.8055E-07	0.62	1.21	1.46	0.75	1.04	0.90	0.56	0.76	0.57	0.59	0.64	0.31
42 4.0725E-07	0.65	1.13	1.22	0.85	1.01	0.93	0.73	0.78	0.60	0.59	0.64	0.26
43 2.8568E-07	0.80	1.01	1.22	0.73	1.05	0.82	0.67	0.77	0.52	0.44	0.75	0.29
44 2.0040E-07	0.68	0.94	1.20	0.86	0.98	0.72	0.56	0.67	0.47	0.55	0.75	0.24
45 1.4058E-07	0.69	0.97	1.04	0.72	1.01	0.97	0.63	0.62	0.47	0.70	0.74	0.21
46 9.8616E-08	0.78	0.93	0.94	0.90	1.00	0.94	0.49	0.76	0.43	0.74	0.67	0.19
47 6.9178E-08	0.63	0.97	0.99	0.75	1.00	0.73	0.56	0.61	0.40	1.40	0.81	0.22
48 4.8527E-08	0.56	0.97	1.05	0.70	0.86	0.72	0.49	0.70	0.53	2.48	0.69	0.23
49 3.4041E-08	0.62	1.21	1.08	0.90	0.95	0.71	1.01	1.00	0.45	3.55	1.22	0.26
50 2.3880E-08	70.71	52.02	14.93	62.86	44.38	9.54	55.57	37.93	5.86	42.56	30.96	4.04

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5850.00

PER GM OF CO	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	8.3755E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.54	0.01	0.0
2	5.8753E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.37	0.38	0.0
3	4.1215E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.26	0.0	0.0	2.12	1.81	0.0
4	2.8912E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.71	0.01	0.0	1.98	2.71	0.42
5	2.0281E-01	0.0	0.0	0.0	0.04	0.0	0.0	1.02	0.64	0.0	2.05	3.14	2.05
6	1.4227E-01	0.0	0.0	0.0	0.34	0.0	0.0	1.05	1.48	0.0	2.13	3.02	5.92
7	9.9801E-02	0.0	0.0	0.0	0.58	0.08	0.0	1.60	1.69	0.13	1.80	3.24	8.15
8	7.0009E-02	0.08	0.0	0.0	0.99	0.62	0.0	1.54	1.92	1.77	1.89	2.83	6.56
9	4.9111E-02	0.29	0.0	0.0	0.84	1.02	0.0	1.65	2.53	3.96	1.85	2.64	5.75
10	3.4451E-02	0.39	0.08	0.0	0.93	1.64	0.23	1.27	2.61	6.48	1.70	2.47	6.72
11	2.4167E-02	0.78	0.51	0.0	0.97	1.47	1.53	1.73	2.58	6.18	1.57	2.36	5.83
12	1.6593E-02	0.92	0.87	0.0	1.32	1.47	2.92	1.46	2.53	6.79	1.37	2.11	4.73
13	1.1892E-02	0.88	1.13	0.26	1.18	1.63	4.40	1.59	2.53	5.16	1.30	1.93	4.93
14	8.3422E-03	0.81	1.58	1.18	1.39	2.47	5.62	1.05	2.18	4.67	1.27	1.83	4.72
15	5.8519E-03	0.78	1.36	2.20	1.26	2.30	4.74	1.32	1.93	4.49	1.29	1.79	3.74
16	4.1051E-03	0.87	1.30	3.08	1.12	2.37	5.25	1.16	1.76	4.59	1.14	1.67	3.38
17	2.8797E-03	0.85	1.52	4.65	1.11	2.16	5.96	1.21	1.67	4.55	1.03	1.67	2.95
18	2.0201E-03	1.24	1.57	5.17	1.06	1.87	4.80	0.95	1.55	4.11	0.96	1.49	2.62
19	1.4170E-03	1.05	1.88	3.99	0.95	1.69	3.76	1.05	1.49	3.50	0.96	1.46	2.70
20	9.9404E-04	1.04	2.39	4.25	1.02	1.57	3.82	1.06	1.56	3.26	0.95	1.27	2.03
21	6.9731E-04	0.88	1.95	4.87	0.80	1.41	3.51	0.95	1.53	2.58	0.90	1.21	1.96
22	4.8915E-04	0.83	1.63	4.41	0.96	1.46	3.21	0.91	1.52	2.67	0.88	1.19	1.79
23	3.4314E-04	0.87	1.79	4.14	0.86	1.52	3.33	0.92	1.32	2.08	0.86	1.14	1.68
24	2.4071E-04	0.76	1.36	3.90	0.85	1.38	3.05	0.88	1.30	2.02	0.94	1.34	1.56
25	1.6885E-04	0.74	1.40	3.28	0.81	1.39	3.04	0.79	1.37	2.06	0.83	1.29	1.44
26	1.1845E-04	0.80	1.18	3.24	0.80	1.26	2.78	0.68	1.25	1.95	0.73	1.00	1.15
27	8.3090E-05	0.75	1.13	2.71	0.78	1.19	2.15	0.74	1.05	1.55	0.70	0.96	1.26
28	5.8287E-05	0.65	1.22	2.33	0.93	1.25	1.98	0.71	1.08	1.73	0.65	0.93	1.01
29	4.0887E-05	0.81	1.55	2.60	0.88	1.20	1.72	0.77	1.05	1.70	0.60	1.02	0.96
30	2.8668E-05	0.66	1.28	2.36	0.89	1.20	1.65	0.64	1.08	1.51	0.72	0.80	1.00
31	2.0120E-05	0.67	1.19	2.23	0.70	1.20	1.59	0.65	0.96	1.25	0.53	0.74	0.87
32	1.4114E-05	0.71	1.01	2.43	0.58	1.02	1.54	0.56	0.93	1.34	0.60	0.88	0.76
33	9.9009E-06	0.73	1.05	2.17	0.52	0.94	1.41	0.63	1.00	1.12	0.57	0.82	0.70
34	6.9453E-06	0.59	1.04	1.82	0.72	1.05	1.67	0.60	1.05	1.16	0.45	0.76	0.61
35	4.8721E-06	0.80	0.98	1.49	0.51	1.04	1.49	0.70	0.78	0.90	0.54	0.71	0.61
36	3.4177E-06	0.76	1.03	1.48	0.45	1.05	1.36	0.80	0.87	1.03	0.45	0.65	0.53
37	2.3975E-06	0.75	0.96	1.26	0.67	0.86	1.24	0.65	0.86	0.96	0.44	0.62	0.51
38	1.6818E-06	0.75	0.84	1.11	0.68	0.85	1.33	0.69	0.90	0.78	0.38	0.54	0.53
39	1.1798E-06	0.68	1.08	1.42	0.66	0.91	1.31	0.52	0.92	0.61	0.63	0.67	0.49
40	8.2760E-07	0.45	1.10	1.41	0.47	0.94	0.89	0.51	1.00	0.74	0.71	0.63	0.46
41	5.8055E-07	0.42	0.93	1.20	0.43	0.79	0.95	0.52	0.80	0.54	0.57	0.71	0.36
42	4.0725E-07	0.47	0.85	1.11	0.59	0.88	1.07	0.41	0.63	0.79	0.46	0.74	0.39
43	2.8568E-07	0.46	0.84	1.21	0.50	0.89	0.93	0.53	0.54	0.56	0.41	0.75	0.36
44	2.0040E-07	0.55	0.82	1.21	0.60	0.91	0.84	0.49	0.65	0.49	0.55	0.61	0.36
45	1.4058E-07	0.47	0.90	1.22	0.47	1.07	1.00	0.51	0.59	0.42	0.84	0.58	0.36
46	9.8616E-08	0.52	0.93	1.15	0.62	0.96	0.62	0.49	0.70	0.45	1.52	0.63	0.31
47	6.9178E-08	0.65	0.93	1.00	0.71	0.81	0.79	0.56	0.78	0.47	2.39	0.86	0.33
48	4.8527E-08	0.74	1.17	1.11	0.88	0.77	0.64	1.67	0.85	0.53	4.11	1.32	0.30
49	3.4041E-08	0.56	1.39	1.27	0.98	0.92	0.73	2.39	1.09	0.57	5.27	2.95	0.38
50	2.3880E-08	70.54	52.28	14.08	64.60	46.52	9.15	56.45	40.89	5.80	41.50	33.12	3.77

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 5950.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 1.6635E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0	0.0
2 1.1509E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.68	0.05	0.0
3 7.9621E-01	0.0	0.0	0.0	0.0	0.0	0.0	0.25	0.0	0.0	1.59	0.62	0.0
4 5.5084E-01	0.0	0.0	0.0	0.05	0.0	0.0	0.70	0.10	0.0	2.38	1.86	0.12
5 3.8109E-01	0.0	0.0	0.0	0.35	0.0	0.0	1.09	0.74	0.0	2.51	3.26	1.02
6 2.6365E-01	0.08	0.0	0.0	0.54	0.12	0.0	1.16	1.39	0.0	2.02	3.69	2.41
7 1.8240E-01	0.32	0.0	0.0	1.08	0.68	0.0	1.58	1.94	0.33	2.00	3.40	6.34
8 1.2619E-01	0.47	0.09	0.0	0.81	1.04	0.0	1.95	2.16	2.16	1.84	3.11	8.60
9 8.7303E-02	0.73	0.58	0.0	0.90	1.76	0.23	1.64	2.65	5.05	2.04	2.84	9.95
10 6.0399E-02	0.93	0.85	0.0	0.95	1.48	1.82	1.80	3.11	6.75	1.47	2.81	7.72
11 4.1786E-02	0.75	1.34	0.13	1.42	1.63	3.35	1.67	2.88	6.00	1.50	2.53	6.05
12 2.8909E-02	0.81	1.59	1.68	1.38	1.79	5.97	1.27	2.57	6.96	1.42	2.30	5.41
13 2.0000E-02	0.82	1.38	2.52	1.33	2.70	5.14	1.40	2.37	7.07	1.42	1.99	4.94
14 1.3837E-02	0.71	1.43	3.70	1.38	2.26	4.91	1.14	1.97	6.70	1.48	1.85	4.44
15 9.5726E-03	1.10	1.63	5.89	1.19	2.18	4.93	1.23	1.95	4.62	1.21	1.74	4.20
16 6.6226E-03	1.11	1.51	4.55	1.27	2.22	6.35	1.01	1.84	4.18	1.43	1.70	3.08
17 4.5817E-03	1.03	1.96	3.99	1.12	1.99	5.14	1.03	1.71	3.60	1.19	1.65	2.83
18 3.1698E-03	1.02	2.05	4.16	0.82	1.80	4.92	0.99	1.62	3.70	1.14	1.62	2.40
19 2.1930E-03	1.01	1.84	4.24	0.96	1.67	4.46	1.05	1.81	3.14	0.90	1.53	2.06
20 1.5172E-03	0.95	1.56	4.43	0.87	1.53	3.89	1.12	1.61	2.89	1.01	1.38	2.05
21 1.0496E-03	0.99	1.68	4.97	0.91	1.50	3.42	1.07	1.46	2.85	0.96	1.42	1.83
22 7.2616E-04	0.96	1.75	4.06	0.81	1.53	2.68	1.10	1.46	2.52	0.84	1.27	1.48
23 5.0238E-04	0.78	1.59	3.75	0.90	1.62	2.41	0.89	1.35	2.13	0.72	1.02	1.62
24 3.4756E-04	0.70	1.45	3.65	0.70	1.50	2.56	0.90	1.17	1.99	0.84	1.11	1.32
25 2.4045E-04	0.73	1.57	3.34	0.90	1.33	2.30	0.71	1.12	1.73	0.70	1.03	1.35
26 1.6635E-04	0.72	1.46	2.57	0.78	1.36	2.07	0.78	1.08	1.67	0.79	1.03	0.95
27 1.1509E-04	0.78	1.36	2.18	0.90	1.18	2.31	0.65	1.00	1.34	0.70	1.01	0.98
28 7.9622E-05	0.66	1.23	2.08	0.90	1.13	2.23	0.69	1.11	1.05	0.68	1.12	0.69
29 5.5085E-05	0.69	1.09	1.84	0.76	1.08	1.93	0.76	1.02	0.98	0.53	1.00	0.88
30 3.8109E-05	0.80	1.13	1.85	0.91	0.85	1.57	0.71	1.05	1.30	0.58	0.92	0.71
31 2.6365E-05	0.59	1.10	2.10	0.69	0.91	1.32	0.68	1.04	1.15	0.74	0.85	0.70
32 1.8240E-05	0.74	1.16	1.66	0.59	1.12	1.24	0.72	0.96	1.02	0.71	0.96	0.62
33 1.2619E-05	0.58	0.96	1.70	0.60	0.94	1.23	0.50	0.94	0.86	0.71	0.75	0.42
34 8.7304E-06	0.69	0.88	1.62	0.46	1.00	1.09	0.74	1.01	0.90	0.68	0.91	0.40
35 6.0399E-06	0.74	1.04	1.79	0.62	1.00	0.95	0.52	1.05	0.77	0.57	0.63	0.40
36 4.1786E-06	0.67	0.81	1.54	0.58	0.99	1.00	0.51	0.87	0.52	0.45	0.62	0.43
37 2.8909E-06	0.76	1.00	1.20	0.55	0.92	1.01	0.56	0.83	0.51	0.57	0.62	0.43
38 2.0000E-06	0.67	1.05	1.11	0.52	1.02	0.81	0.61	1.02	0.38	0.58	0.61	0.32
39 1.3837E-06	0.53	0.97	1.03	0.59	0.94	1.00	0.57	0.97	0.61	0.58	0.58	0.35
40 9.5727E-07	0.58	0.91	1.01	0.67	0.84	0.76	0.44	0.75	0.54	0.47	0.56	0.31
41 6.6227E-07	0.48	0.87	0.90	0.54	0.96	0.58	0.59	0.62	0.42	0.47	0.58	0.37
42 4.5818E-07	0.36	0.78	0.91	0.65	0.77	0.66	0.50	0.62	0.45	0.45	0.58	0.36
43 3.1698E-07	0.41	1.07	0.86	0.59	1.10	0.52	0.56	0.59	0.36	0.54	0.58	0.24
44 2.1930E-07	0.60	0.92	0.90	0.54	0.96	0.60	0.54	0.42	0.32	0.85	0.61	0.27
45 1.5172E-07	0.57	0.95	0.66	0.60	0.86	0.40	1.03	0.62	0.36	1.71	0.75	0.30
46 1.0496E-07	0.58	0.91	0.63	0.62	0.73	0.35	1.38	0.73	0.36	3.24	0.96	0.28
47 7.2617E-08	0.59	0.87	0.58	1.03	0.75	0.38	2.03	0.96	0.30	4.55	1.62	0.31
48 5.0239E-08	0.69	1.10	0.82	1.77	0.68	0.54	3.68	1.56	0.34	5.01	2.77	0.30
49 3.4757E-08	1.12	1.23	0.64	2.47	0.96	0.68	4.67	1.62	0.39	6.73	4.87	0.30
50 2.4046E-08	68.40	49.30	12.76	60.43	44.62	10.29	48.81	38.58	8.73	33.75	28.73	7.46

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 6050.00

MIC-POINT ABSORP COEFF PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360			
	TURB VEL			TURB VEL			TURB VEL			TURB VEL			
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	
1	4.1209E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	2.7592E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	
3	1.9014E 00	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	0.49	0.37	0.0	
4	1.2916E 00	0.0	0.0	0.0	0.03	0.0	0.0	0.64	0.0	0.0	1.72	0.74	0.11
5	8.7731E -01	0.06	0.0	0.0	0.42	0.0	0.0	1.11	0.16	0.0	2.62	1.61	0.53
6	5.9593E -01	0.32	0.0	0.0	0.67	0.16	0.0	1.53	1.68	0.0	2.26	3.92	1.68
7	4.0480E -01	0.47	0.09	0.0	1.18	0.79	0.0	1.82	2.22	0.49	2.20	3.50	3.23
8	2.7497E -01	0.71	0.65	0.0	1.23	1.43	0.09	1.94	2.20	1.45	2.13	3.34	5.74
9	1.8677E -01	0.93	0.84	0.07	1.45	2.15	1.02	1.86	3.12	4.75	1.90	3.35	9.95
10	1.2687E -01	1.14	1.35	0.49	1.40	2.15	2.55	1.73	3.25	7.04	1.71	3.28	8.79
11	8.6179E -02	1.18	1.57	2.01	1.42	2.06	3.80	1.42	2.93	7.03	1.73	2.73	7.31
12	5.8539E -02	1.02	2.15	2.80	1.52	2.57	6.85	1.30	2.72	7.36	1.70	2.44	7.26
13	3.9764E -02	1.16	1.98	3.97	1.30	2.52	6.19	1.26	2.36	7.46	1.51	2.16	6.15
14	2.7010E -02	1.12	1.65	5.02	1.14	2.36	5.69	1.34	2.26	6.24	1.48	2.10	4.82
15	1.8347E -02	1.15	2.01	5.63	1.00	2.20	6.78	1.19	2.06	5.86	1.40	1.89	3.68
16	1.2463E -02	1.06	2.23	5.30	1.03	2.15	5.88	1.10	1.81	4.23	1.55	1.86	3.06
17	8.4655E -03	0.97	1.89	4.67	0.97	1.93	4.88	1.06	1.95	4.23	1.32	1.80	2.92
18	5.7503E -03	0.85	1.79	4.62	0.88	1.71	4.18	1.25	1.79	3.64	1.10	1.72	2.60
19	3.9060E -03	0.87	2.01	6.21	0.98	1.70	4.34	1.31	1.68	2.74	0.92	1.75	2.37
20	2.6532E -03	0.75	1.79	4.11	0.98	1.70	3.31	1.15	1.53	2.55	0.97	1.40	2.37
21	1.8023E -03	0.80	1.64	3.43	0.96	1.64	3.12	1.04	1.46	2.19	0.93	1.51	1.98
22	1.2242E -03	0.75	1.64	3.00	0.80	1.73	2.88	1.14	1.41	2.12	0.90	1.13	1.74
23	8.3157E -04	0.81	1.48	3.47	0.96	1.43	2.69	0.95	1.36	1.81	0.83	1.24	1.90
24	5.6486E -04	0.81	1.43	3.37	0.89	1.49	2.22	0.75	1.22	1.96	0.86	1.19	1.65
25	3.8369E -04	0.78	1.29	2.61	1.08	1.18	1.86	0.79	1.21	1.86	0.91	1.23	1.46
26	2.6063E -04	0.81	1.51	2.24	1.03	1.10	1.96	0.79	1.12	1.59	0.78	1.19	1.44
27	1.7704E -04	0.64	1.30	2.08	0.78	1.20	1.65	0.69	1.20	1.73	0.70	1.18	1.33
28	1.2026E -04	0.79	1.32	1.95	0.92	1.13	1.56	0.63	1.14	1.30	0.59	0.93	1.28
29	8.1686E -05	0.73	1.25	2.03	0.66	1.05	1.56	0.59	1.00	1.49	0.69	0.96	0.95
30	5.5486E -05	0.91	1.09	1.82	0.74	1.05	1.53	0.65	1.07	1.40	0.67	0.95	0.97
31	3.7690E -05	0.80	0.89	1.49	0.63	0.99	1.58	0.60	1.12	1.26	0.68	0.85	0.79
32	2.5602E -05	0.90	1.05	1.70	0.59	0.96	1.29	0.63	1.30	1.12	0.60	0.78	0.84
33	1.7390E -05	0.77	1.11	1.44	0.82	1.07	1.37	0.72	1.01	1.07	0.64	0.78	0.67
34	1.1813E -05	0.65	0.99	1.30	0.58	1.18	1.29	0.60	0.89	1.14	0.48	0.74	0.64
35	8.0241E -06	0.56	0.88	1.22	0.46	1.03	1.08	0.61	0.91	0.89	0.53	0.68	0.63
36	5.4505E -06	0.59	0.93	1.25	0.62	1.03	1.11	0.55	0.81	0.80	0.56	0.55	0.58
37	3.7023E -06	0.69	0.89	1.28	0.48	1.09	1.09	0.49	0.78	0.73	0.65	0.69	0.54
38	2.5149E -06	0.53	0.99	1.17	0.51	0.90	0.98	0.52	0.76	0.68	0.55	0.58	0.35
39	1.7083E -06	0.51	1.02	1.11	0.35	0.85	0.83	0.51	0.74	0.63	0.52	0.55	0.45
40	1.1604E -06	0.58	0.89	1.09	0.66	1.01	0.98	0.58	0.77	0.50	0.41	0.69	0.40
41	7.8821E -07	0.59	1.02	0.92	0.67	0.77	0.79	0.59	0.54	0.46	0.50	0.65	0.31
42	5.3541E -07	0.56	0.81	0.97	0.54	0.88	0.73	0.64	0.51	0.42	0.79	0.65	0.33
43	3.6369E -07	0.44	1.06	0.78	0.57	0.83	0.72	0.81	0.63	0.39	1.08	0.59	0.26
44	2.4704E -07	0.57	0.90	0.75	1.00	0.86	0.54	1.12	0.71	0.42	1.83	0.95	0.30
45	1.6781E -07	0.82	0.98	0.80	1.25	0.74	0.57	1.99	0.62	0.35	3.45	1.24	0.34
46	1.1399E -07	1.21	0.84	0.71	1.78	0.76	0.37	3.18	1.15	0.34	4.66	1.97	0.37
47	7.7427E -08	1.75	0.88	0.74	2.42	0.94	0.44	4.90	1.93	0.31	5.58	2.72	0.33
48	5.2594E -08	2.17	1.21	0.68	3.91	1.50	0.48	5.28	3.04	0.43	6.40	4.19	0.36
49	3.5726E -08	3.28	1.67	0.78	5.79	2.51	0.43	6.23	3.90	0.46	7.42	6.29	0.37
50	2.4267E -08	60.44	45.04	8.92	49.95	39.52	6.74	38.31	31.97	5.08	25.80	22.39	3.87

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 6150.00

PER GM OF CO	MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
		TURB VEL			TURB VEL			TURB VEL			TURB VEL		
		0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1	4.1209E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0
2	2.7992E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.04	0.0
3	1.9014E 00	0.08	0.0	0.0	0.10	0.0	0.0	0.17	0.0	0.0	0.95	0.13	0.0
4	1.2916E 00	0.40	0.0	0.0	0.58	0.0	0.0	1.33	0.15	0.0	1.78	0.89	0.27
5	8.7731E -01	0.58	0.21	0.0	0.93	0.45	0.0	1.56	0.99	0.0	1.75	2.34	0.37
6	5.9593E -01	0.68	0.79	0.0	1.37	1.11	0.0	1.50	2.45	0.42	1.79	2.73	1.28
7	4.0480E -01	0.81	1.03	0.0	1.18	1.99	0.15	1.43	2.56	1.55	1.81	2.69	2.63
8	2.7497E -01	1.14	1.20	0.38	1.17	2.23	2.04	1.28	2.29	2.56	1.58	2.80	6.48
9	1.8677E -01	0.99	1.69	2.89	1.04	1.89	3.94	1.13	2.01	7.74	1.59	2.52	7.18
10	1.2687E -01	1.05	2.03	3.51	1.05	1.82	5.28	1.26	1.97	6.11	1.52	2.33	6.58
11	8.6179E -02	0.80	1.60	4.57	0.94	1.63	5.92	1.06	1.99	5.05	1.50	2.15	7.01
12	5.8539E -02	0.85	1.50	4.13	0.85	1.79	4.72	1.16	2.02	5.18	1.48	2.17	6.46
13	3.9764E -02	0.76	1.62	5.08	0.91	1.71	4.60	1.12	2.18	4.91	1.27	2.22	5.54
14	2.7010E -02	0.76	1.59	4.11	0.77	1.54	4.21	1.08	1.79	5.29	1.17	2.04	4.62
15	1.8347E -02	0.67	1.35	4.11	0.86	1.77	4.09	1.08	1.68	5.12	1.04	1.70	4.98
16	1.2463E -02	0.63	1.42	3.83	0.93	1.55	4.07	1.04	1.31	4.69	0.93	1.74	3.95
17	8.4655E -03	0.70	1.29	3.72	0.94	1.57	3.76	0.95	1.77	3.86	0.89	1.38	3.34
18	5.7503E -03	0.59	1.40	3.32	0.90	1.32	4.14	0.83	1.65	3.68	0.97	1.43	3.10
19	3.9060E -03	0.70	1.31	3.22	0.79	1.28	3.98	0.85	1.47	3.02	0.78	1.32	2.94
20	2.6532E -03	0.83	1.27	3.10	0.72	1.31	3.58	0.81	1.15	3.33	0.98	1.14	2.50
21	1.8023E -03	0.73	1.23	3.01	0.69	1.20	3.24	0.76	1.23	2.91	0.77	1.13	2.12
22	1.2242E -03	0.63	1.23	3.41	0.71	1.37	2.93	0.59	1.27	2.46	0.87	1.10	1.56
23	8.3157E -04	0.73	1.07	3.21	0.66	1.32	2.45	0.69	1.13	1.91	0.79	1.13	1.50
24	5.6486E -04	0.52	1.10	2.86	0.76	1.22	2.34	0.78	1.22	1.75	0.79	1.06	1.28
25	3.8369E -04	0.58	0.99	2.77	0.65	1.17	2.40	0.70	1.20	1.79	0.77	1.02	1.26
26	2.6063E -04	0.53	0.92	2.26	0.66	1.13	2.22	0.64	1.07	1.71	0.71	1.02	1.08
27	1.7770E -04	0.69	1.34	2.04	0.57	1.07	1.65	0.64	0.94	1.27	0.54	0.87	1.11
28	1.2026E -04	0.68	1.21	2.04	0.51	1.12	1.53	0.54	1.02	1.25	0.45	0.78	0.97
29	8.1686E -05	0.58	1.27	2.22	0.64	1.11	1.32	0.40	0.81	1.10	0.52	0.75	0.91
30	5.5486E -05	0.58	1.09	1.63	0.56	1.01	1.44	0.76	0.82	1.09	0.51	0.70	0.93
31	3.7690E -05	0.49	1.18	1.65	0.59	1.01	1.30	0.71	0.93	0.93	0.30	0.55	0.69
32	2.5602E -05	0.50	0.86	1.69	0.51	0.85	1.44	0.70	0.79	0.91	0.40	0.63	0.58
33	1.7390E -05	0.56	0.91	1.15	0.59	0.83	1.15	0.45	0.63	0.81	0.37	0.60	0.54
34	1.1813E -05	0.53	0.93	1.07	0.39	0.88	0.99	0.53	0.58	0.62	0.46	0.50	0.57
35	8.0241E -06	0.54	0.93	1.24	0.39	0.70	0.84	0.33	0.69	0.52	0.44	0.50	0.41
36	5.4505E -06	0.39	0.78	1.17	0.41	0.69	0.84	0.42	0.48	0.53	0.45	0.64	0.57
37	3.7023E -06	0.57	0.87	1.14	0.47	0.70	0.64	0.43	0.56	0.54	0.38	0.57	0.51
38	2.5149E -06	0.42	0.95	1.11	0.65	0.63	0.56	0.45	0.62	0.49	0.33	0.75	0.48
39	1.7083E -06	0.49	0.75	0.81	0.65	0.56	0.44	0.44	0.61	0.47	0.34	0.76	0.45
40	1.1604E -06	0.47	0.69	0.64	0.60	0.53	0.50	0.30	0.51	0.48	0.40	0.70	0.36
41	7.8821E -07	0.52	0.73	0.60	0.58	0.72	0.56	0.42	0.56	0.56	0.41	0.73	0.38
42	5.3541E -07	0.58	0.51	0.63	0.58	0.70	0.49	0.58	0.67	0.42	0.55	0.66	0.41
43	3.6369E -07	0.98	0.65	0.48	0.98	0.64	0.52	0.90	0.68	0.40	1.14	0.66	0.39
44	2.4704E -07	1.46	0.77	0.56	1.38	0.81	0.38	1.87	0.77	0.32	2.00	0.68	0.32
45	1.6781E -07	1.71	0.81	0.47	2.21	0.70	0.43	2.89	1.05	0.37	3.46	1.21	0.41
46	1.1399E -07	2.67	1.35	0.50	3.75	1.46	0.47	4.42	2.23	0.48	4.76	2.33	0.35
47	7.7427E -08	4.00	2.11	0.53	4.79	2.47	0.49	5.08	3.45	0.43	5.62	3.49	0.41
48	5.2594E -08	5.20	2.87	0.51	5.53	4.20	0.48	5.83	4.39	0.39	6.08	4.23	0.46
49	3.5726E -08	5.75	4.19	0.53	5.71	4.56	0.44	6.91	5.16	0.51	7.49	5.90	0.75
50	2.4267E -08	52.90	44.41	12.10	46.80	39.68	11.04	40.20	34.50	10.07	34.07	30.59	9.01

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 6250.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
PER GM OF CO												
1 4.1209E 00	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0	0.0	0.04	0.0	0.0
2 2.7952E 00	0.11	0.0	0.0	0.0	0.0	0.0	0.03	0.0	0.0	0.39	0.10	0.0
3 1.9014E 00	0.50	0.0	0.0	0.60	0.0	0.0	0.74	0.10	0.0	1.02	0.20	0.11
4 1.2916E 00	0.69	0.29	0.0	1.24	0.06	0.0	1.48	0.62	0.08	1.10	1.38	0.28
5 8.7731E -01	1.15	0.86	0.0	1.24	1.51	0.0	1.48	1.54	0.28	1.60	1.70	0.62
6 5.9593E -01	0.93	1.30	0.0	1.04	2.23	0.24	1.30	2.56	0.71	1.93	1.97	1.86
7 4.0480E -01	0.99	2.13	0.57	1.18	1.93	0.86	1.28	2.33	2.67	1.50	2.96	5.17
8 2.7497E -01	0.76	1.65	3.13	0.94	1.82	4.51	1.14	2.04	4.85	1.68	2.56	2.82
9 1.8677E -01	0.80	1.64	4.87	0.82	1.86	7.69	1.19	1.91	6.93	1.18	2.41	4.31
10 1.2687E -01	0.76	1.58	6.46	0.81	1.72	4.93	1.20	2.06	4.92	1.35	2.29	6.84
11 8.6179E -02	0.59	1.57	4.67	0.93	1.70	4.21	1.02	2.01	4.00	1.17	1.87	5.57
12 5.8539E -02	0.62	1.38	3.71	0.96	1.33	3.72	0.82	1.66	3.82	1.03	1.84	5.03
13 3.9764E -02	0.61	1.19	3.64	0.77	1.62	3.04	0.70	1.55	4.00	1.09	1.45	4.08
14 2.7010E -02	0.87	1.25	2.93	0.75	1.43	2.91	0.88	1.31	4.05	1.02	1.52	3.48
15 1.8347E -02	0.70	1.18	2.66	0.60	1.38	2.99	0.78	1.27	3.52	1.21	1.37	3.27
16 1.2463E -02	0.71	1.26	2.18	0.67	1.12	2.79	0.87	1.21	3.06	1.13	1.10	2.98
17 8.4655E -03	0.62	1.10	2.35	0.70	1.11	2.96	1.01	1.16	2.65	0.86	1.12	2.82
18 5.7503E -03	0.62	1.17	2.42	0.55	0.93	3.17	0.91	1.12	2.57	0.74	0.91	2.92
19 3.9060E -03	0.52	1.07	2.16	0.79	1.20	2.62	0.81	1.05	2.37	0.59	1.03	2.52
20 2.6532E -03	0.50	1.05	2.36	0.66	1.02	2.42	0.82	1.00	2.36	0.61	0.90	2.09
21 1.8023E -03	0.52	0.99	2.70	0.81	1.08	2.24	0.61	1.09	2.51	0.62	0.84	1.70
22 1.2242E -03	0.48	0.91	2.61	0.91	0.97	1.88	0.51	0.78	2.30	0.51	0.62	1.67
23 8.3157E -04	0.69	0.89	2.14	0.65	0.97	1.94	0.57	0.71	1.72	0.45	0.72	1.54
24 5.6486E -04	0.56	0.93	2.06	0.46	0.85	2.14	0.61	0.72	1.64	0.46	0.64	1.45
25 3.8369E -04	0.65	0.88	1.79	0.57	0.78	1.91	0.42	0.70	1.53	0.41	0.56	1.34
26 2.6063E -04	0.73	0.77	1.60	0.49	0.65	1.99	0.35	0.54	1.42	0.23	0.53	1.41
27 1.7704E -04	0.70	0.78	1.48	0.46	0.65	1.55	0.32	0.51	1.31	0.38	0.67	1.25
28 1.2026E -04	0.54	0.88	1.94	0.48	0.58	1.39	0.39	0.65	1.35	0.32	0.55	0.96
29 8.1686E -05	0.29	0.64	1.73	0.52	0.59	1.40	0.44	0.50	1.08	0.29	0.55	1.02
30 5.5486E -05	0.46	0.59	1.63	0.40	0.49	1.23	0.41	0.56	1.17	0.34	0.47	1.00
31 3.7690E -05	0.40	0.50	1.52	0.33	0.57	1.18	0.31	0.52	0.93	0.33	0.65	0.94
32 2.5602E -05	0.40	0.59	1.27	0.29	0.57	1.19	0.28	0.45	1.03	0.40	0.58	0.89
33 1.7390E -05	0.41	0.58	1.28	0.20	0.52	1.02	0.22	0.59	0.84	0.37	0.58	0.80
34 1.1813E -05	0.46	0.52	1.24	0.21	0.57	1.03	0.17	0.70	0.97	0.33	0.42	1.01
35 8.0241E -06	0.40	0.62	1.09	0.35	0.61	0.92	0.28	0.44	0.83	0.42	0.57	0.84
36 5.4505E -06	0.28	0.52	0.89	0.36	0.56	0.85	0.32	0.42	0.80	0.38	0.53	0.73
37 3.7023E -06	0.30	0.68	0.97	0.37	0.44	0.82	0.31	0.55	0.76	0.29	0.42	0.75
38 2.5149E -06	0.28	0.62	0.96	0.28	0.53	0.76	0.28	0.48	0.79	0.34	0.37	0.71
39 1.7083E -06	0.24	0.61	0.89	0.27	0.59	0.89	0.29	0.47	0.80	0.31	0.55	0.84
40 1.1604E -06	0.39	0.42	0.70	0.30	0.44	0.80	0.27	0.46	0.71	0.31	0.44	0.69
41 7.8821E -07	0.55	0.56	0.82	0.45	0.39	0.66	0.43	0.45	0.73	0.38	0.33	0.68
42 5.3541E -07	1.08	0.49	0.79	0.72	0.49	0.73	0.74	0.45	0.70	0.51	0.44	0.68
43 3.6369E -07	1.55	0.55	0.77	1.65	0.51	0.72	1.13	0.49	0.71	0.87	0.50	0.63
44 2.4704E -07	2.38	0.77	0.85	2.22	0.66	0.86	2.12	0.61	0.76	1.45	0.62	0.83
45 1.6781E -07	2.91	1.21	0.76	3.32	1.08	0.70	3.19	1.31	0.74	2.64	1.19	0.70
46 1.1399E -07	3.81	2.10	0.75	3.66	2.38	0.68	3.83	1.82	0.77	3.69	1.85	0.71
47 7.7427E -08	4.42	3.38	0.81	4.54	3.47	0.83	4.93	3.56	0.74	4.72	3.24	0.71
48 5.2594E -08	5.72	4.56	1.01	5.89	4.92	0.97	5.97	5.22	0.84	5.69	4.53	0.95
49 3.5726E -08	7.32	6.55	1.21	7.62	6.95	1.26	7.33	6.58	1.45	7.04	5.82	1.49
50 2.4267E -08	48.03	44.24	17.63	45.97	42.17	16.40	44.49	41.17	15.23	44.28	41.54	14.31

CARBON MONOXIDE--SECOND OVERTONE BAND
OPACITY PROBABILITY DISTRIBUTION FUNCTION

WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 6350.00

PER GM OF CO	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.1209E 00	0.06	0.0	0.0	0.0	0.0	0.0	0.04	0.0	0.0	0.07	0.0	0.0
2 2.7992E 00	0.43	0.0	0.0	0.62	0.0	0.0	0.53	0.06	0.0	0.24	0.12	0.0
3 1.9014E 00	1.01	0.15	0.0	0.74	0.12	0.0	0.80	0.22	0.0	0.90	0.23	0.04
4 1.2916E 00	0.83	0.89	0.0	1.07	1.30	0.0	0.93	1.06	0.26	0.98	1.01	0.28
5 8.7731E-01	0.74	1.80	0.05	0.78	1.38	0.31	1.16	1.61	0.35	1.16	1.51	0.55
6 5.9593E-01	0.71	1.41	0.34	0.94	1.58	0.63	0.95	1.61	1.38	1.18	1.84	1.56
7 4.0480E-01	0.68	1.37	2.74	0.78	1.49	3.64	1.19	1.65	2.81	1.31	1.65	2.36
8 2.7497E-01	0.73	1.34	6.10	0.95	1.62	4.55	1.02	1.87	3.99	1.26	1.97	3.64
9 1.8677E-01	0.76	1.24	4.65	0.86	1.55	4.56	0.90	1.94	4.38	1.21	2.14	4.61
10 1.2687E-01	0.64	1.36	3.62	0.73	1.52	3.81	0.89	1.74	4.43	1.35	1.97	4.28
11 8.6179E-02	0.56	1.27	3.31	0.72	1.53	3.76	0.89	1.46	5.15	0.94	1.71	5.79
12 5.8539E-02	0.66	1.36	3.04	0.59	1.39	3.83	0.86	1.49	4.77	1.06	1.54	5.78
13 3.9764E-02	0.54	1.18	3.20	0.61	1.29	4.10	0.86	1.37	4.77	0.98	1.53	4.35
14 2.7010E-02	0.53	1.26	3.38	0.73	1.16	4.48	0.84	1.23	3.53	0.77	1.33	4.11
15 1.8347E-02	0.54	1.10	3.57	0.81	1.24	3.80	0.61	1.22	3.49	0.82	1.08	3.27
16 1.2463E-02	0.54	1.11	3.71	0.68	1.05	2.94	0.86	1.21	3.32	0.67	1.15	3.07
17 8.4655E-03	0.73	1.10	3.14	0.61	1.10	2.51	0.64	1.14	2.42	0.65	1.00	2.61
18 5.7503E-03	0.58	0.95	2.34	0.55	1.03	2.20	0.47	0.77	1.96	0.49	0.88	1.79
19 3.9060E-03	0.52	0.81	1.83	0.58	0.90	2.13	0.46	0.78	1.84	0.49	0.79	1.49
20 2.6532E-03	0.48	0.84	1.75	0.55	0.81	1.69	0.40	0.79	1.64	0.35	0.63	1.45
21 1.8023E-03	0.52	0.95	1.86	0.46	0.71	1.49	0.37	0.64	1.43	0.43	0.70	1.41
22 1.2242E-03	0.45	0.76	1.75	0.35	0.67	1.57	0.40	0.64	1.18	0.38	0.63	1.18
23 8.3157E-04	0.38	0.68	1.51	0.28	0.70	1.50	0.38	0.61	1.26	0.33	0.66	1.19
24 5.6486E-04	0.56	0.71	1.38	0.31	0.69	1.18	0.36	0.59	1.15	0.41	0.68	1.18
25 3.8369E-04	0.34	0.76	1.22	0.24	0.62	1.11	0.29	0.64	1.03	0.47	0.75	0.92
26 2.6063E-04	0.27	0.69	1.32	0.35	0.62	1.08	0.26	0.67	1.04	0.44	0.55	1.07
27 1.7704E-04	0.23	0.58	1.18	0.33	0.59	1.01	0.34	0.57	1.04	0.37	0.73	1.00
28 1.2026E-04	0.17	0.62	0.95	0.34	0.48	0.95	0.29	0.57	0.90	0.47	0.54	0.86
29 8.1686E-05	0.23	0.60	0.93	0.28	0.58	0.87	0.28	0.71	0.79	0.34	0.57	0.73
30 5.5486E-05	0.23	0.49	0.88	0.34	0.59	0.84	0.32	0.54	0.80	0.40	0.50	0.88
31 3.7690E-05	0.33	0.51	0.87	0.19	0.59	0.84	0.34	0.49	0.88	0.28	0.51	0.86
32 2.5602E-05	0.31	0.51	0.83	0.21	0.53	0.81	0.33	0.45	0.78	0.37	0.44	0.79
33 1.7390E-05	0.33	0.56	0.82	0.27	0.50	0.80	0.30	0.45	0.76	0.29	0.38	0.67
34 1.1813E-05	0.27	0.47	0.72	0.30	0.38	0.66	0.33	0.34	0.58	0.36	0.44	0.58
35 8.0241E-06	0.26	0.46	0.74	0.29	0.32	0.72	0.28	0.43	0.76	0.31	0.42	0.73
36 5.4505E-06	0.18	0.38	0.63	0.18	0.46	0.68	0.30	0.42	0.69	0.26	0.40	0.74
37 3.7023E-06	0.24	0.40	0.63	0.27	0.43	0.62	0.27	0.37	0.61	0.27	0.31	0.60
38 2.5149E-06	0.36	0.49	0.65	0.24	0.37	0.51	0.27	0.37	0.57	0.26	0.43	0.47
39 1.7083E-06	0.38	0.35	0.63	0.39	0.35	0.68	0.38	0.43	0.52	0.31	0.55	0.59
40 1.1604E-06	0.63	0.39	0.52	0.47	0.55	0.56	0.46	0.37	0.56	0.24	0.52	0.63
41 7.8821E-07	0.99	0.57	0.59	0.83	0.41	0.58	0.54	0.49	0.69	0.29	0.42	0.58
42 5.3641E-07	1.72	0.63	0.66	1.45	0.48	0.53	0.87	0.46	0.56	0.49	0.53	0.53
43 3.6369E-07	2.31	0.69	0.56	2.09	0.55	0.55	1.49	0.57	0.46	0.89	0.56	0.42
44 2.4704E-07	3.25	1.16	0.63	3.02	1.03	0.60	2.43	0.86	0.45	1.36	0.68	0.47
45 1.6781E-07	4.33	2.85	0.51	3.85	2.28	0.57	3.36	1.85	0.57	2.46	1.05	0.56
46 1.1399E-07	4.91	4.05	0.68	4.88	3.76	0.60	4.42	2.83	0.63	3.52	1.68	0.61
47 7.7427E-08	6.70	4.78	0.66	6.05	4.72	0.52	5.11	3.70	0.55	4.66	2.58	0.51
48 5.2594E-08	6.29	5.46	0.72	6.53	5.26	0.61	6.88	5.20	0.50	5.61	4.08	0.45
49 3.5726E-08	7.57	6.35	1.14	6.13	5.06	0.96	6.01	5.18	0.74	7.00	5.78	0.69
50 2.4267E-08	42.99	41.56	27.06	45.18	43.66	27.06	47.04	45.34	27.03	49.85	47.85	26.97

CARBON MONOXIDE--SECOND OVERTONE BAND
 OPACITY PROBABILITY DISTRIBUTION FUNCTION
WAVE NUMBER AT CENTER OF 100 CM⁻¹ INTERVAL = 6450.00

MID-POINT ABSORP COEFF	TEMP = 1680			TEMP = 2016			TEMP = 2520			TEMP = 3360		
	TURB VEL			TURB VEL			TURB VEL			TURB VEL		
	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S	0 KM/S	2 KM/S	8 KM/S
1 4.1209E 00	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 2.7992E 00	0.41	0.0	0.0	0.45	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0
3 1.9014E 00	0.42	0.36	0.0	0.40	0.10	0.0	0.55	0.08	0.0	0.06	0.05	0.0
4 1.2916E 00	0.36	0.68	0.0	0.46	0.78	0.12	0.63	0.51	0.10	0.74	0.06	0.0
5 8.7731E -01	0.29	0.69	0.34	0.37	0.85	0.26	0.54	0.96	0.27	0.88	0.68	0.27
6 5.9593E -01	0.43	0.58	0.70	0.52	0.68	0.35	0.53	0.88	0.34	0.54	1.29	0.28
7 4.0480E -01	0.32	0.65	2.86	0.37	0.78	2.75	0.48	1.02	1.47	0.54	1.14	0.56
8 2.7497E -01	0.46	0.67	1.59	0.43	0.84	1.93	0.27	0.77	2.70	0.40	0.90	1.86
9 1.8677E -01	0.19	0.65	1.39	0.20	0.58	1.60	0.27	0.58	2.21	0.40	0.59	3.40
10 1.2687E -01	0.24	0.61	1.34	0.31	0.51	1.75	0.30	0.52	2.31	0.21	0.59	2.80
11 8.6179E -02	0.26	0.54	1.49	0.10	0.57	1.90	0.17	0.51	1.81	0.43	0.54	1.84
12 5.8539E -02	0.08	0.36	1.51	0.17	0.35	1.51	0.19	0.40	1.25	0.29	0.44	1.27
13 3.9764E -02	0.15	0.44	1.42	0.13	0.41	1.03	0.29	0.36	0.96	0.28	0.28	1.00
14 2.7010E -02	0.10	0.34	0.98	0.18	0.24	0.85	0.29	0.25	0.83	0.26	0.36	0.82
15 1.8347E -02	0.13	0.35	0.77	0.22	0.37	0.67	0.15	0.36	0.66	0.25	0.43	0.70
16 1.2463E -02	0.15	0.22	0.65	0.24	0.21	0.57	0.24	0.28	0.47	0.18	0.29	0.54
17 8.4655E -03	0.16	0.26	0.47	0.15	0.33	0.36	0.15	0.31	0.32	0.10	0.29	0.29
18 5.7503E -03	0.21	0.18	0.31	0.20	0.21	0.29	0.18	0.18	0.30	0.24	0.20	0.33
19 3.9060E -03	0.16	0.32	0.27	0.12	0.28	0.23	0.16	0.31	0.21	0.17	0.36	0.23
20 2.6532E -03	0.13	0.22	0.19	0.15	0.22	0.24	0.10	0.27	0.25	0.13	0.22	0.20
21 1.8023E -03	0.16	0.24	0.27	0.13	0.23	0.21	0.12	0.18	0.19	0.03	0.20	0.25
22 1.2242E -03	0.13	0.27	0.16	0.08	0.24	0.15	0.18	0.24	0.17	0.24	0.22	0.18
23 8.3157E -04	0.11	0.16	0.18	0.13	0.28	0.21	0.14	0.22	0.18	0.18	0.19	0.13
24 5.6486E -04	0.11	0.24	0.20	0.08	0.17	0.16	0.06	0.16	0.17	0.12	0.17	0.19
25 3.8369E -04	0.06	0.15	0.11	0.18	0.08	0.11	0.11	0.09	0.14	0.05	0.18	0.15
26 2.6063E -04	0.12	0.17	0.11	0.12	0.17	0.14	0.03	0.17	0.10	0.10	0.20	0.10
27 1.7704E -04	0.07	0.10	0.15	0.10	0.08	0.15	0.16	0.15	0.14	0.11	0.25	0.15
28 1.2026E -04	0.07	0.08	0.14	0.04	0.17	0.08	0.14	0.24	0.10	0.14	0.18	0.10
29 8.1686E -05	0.17	0.19	0.07	0.12	0.24	0.09	0.11	0.18	0.08	0.12	0.18	0.10
30 5.5486E -05	0.12	0.22	0.08	0.03	0.19	0.08	0.06	0.21	0.08	0.05	0.11	0.08
31 3.7690E -05	0.10	0.16	0.10	0.04	0.14	0.10	0.11	0.15	0.10	0.07	0.17	0.10
32 2.5602E -05	0.04	0.13	0.09	0.14	0.20	0.09	0.03	0.09	0.10	0.15	0.12	0.06
33 1.7390E -05	0.08	0.18	0.08	0.12	0.07	0.06	0.04	0.10	0.03	0.23	0.16	0.08
34 1.1813E -05	0.05	0.10	0.06	0.11	0.08	0.05	0.10	0.19	0.08	0.16	0.14	0.04
35 8.0241E -06	0.05	0.08	0.03	0.03	0.16	0.05	0.09	0.16	0.04	0.08	0.13	0.07
36 5.4505E -06	0.09	0.21	0.07	0.12	0.19	0.05	0.10	0.12	0.05	0.08	0.16	0.05
37 3.7023E -06	0.14	0.14	0.06	0.05	0.12	0.07	0.09	0.11	0.06	0.06	0.19	0.04
38 2.5149E -06	0.12	0.12	0.04	0.04	0.10	0.03	0.05	0.20	0.04	0.06	0.14	0.04
39 1.7083E -06	0.10	0.17	0.04	0.09	0.22	0.03	0.12	0.12	0.02	0.12	0.04	0.03
40 1.1604E -06	0.18	0.22	0.01	0.09	0.17	0.01	0.21	0.13	0.01	0.11	0.15	0.04
41 7.8821E -07	0.49	0.13	0.04	0.31	0.09	0.07	0.17	0.14	0.07	0.09	0.11	0.03
42 5.3541E -07	0.84	0.17	0.05	0.69	0.16	0.02	0.28	0.04	0.02	0.12	0.10	0.02
43 3.6369E -07	1.13	0.19	0.02	1.00	0.11	0.01	0.65	0.16	0.01	0.23	0.22	0.02
44 2.4704E -07	1.41	0.72	0.01	1.37	0.38	0.01	1.11	0.30	0.01	0.36	0.20	0.01
45 1.6781E -07	1.84	1.25	0.0	1.72	1.12	0.0	1.39	0.45	0.0	0.94	0.16	0.0
46 1.1399E -07	2.06	1.42	0.02	1.98	1.43	0.02	1.95	1.28	0.02	1.45	0.37	0.01
47 7.7427E -08	1.77	1.22	0.02	1.86	1.26	0.02	2.03	1.36	0.02	1.87	0.98	0.02
48 5.2594E -08	1.52	1.36	0.04	1.41	1.25	0.04	1.44	1.25	0.01	1.99	1.51	0.02
49 3.5726E -08	0.81	0.78	0.18	1.31	1.25	0.15	1.33	1.27	0.10	1.38	1.19	0.02
50 2.4267E -08	81.31	81.31	81.29	81.34	81.34	81.32	82.02	81.99	81.40	83.21	83.17	81.48

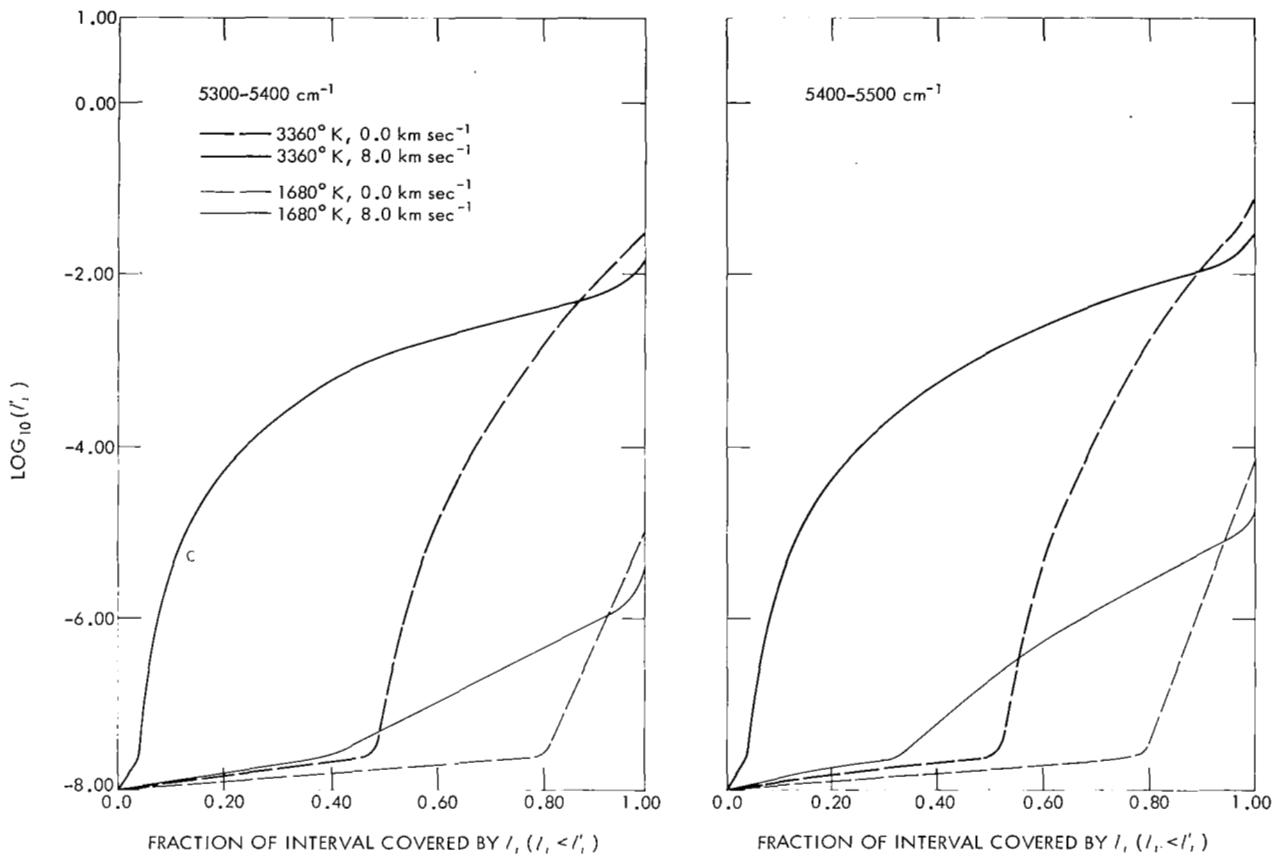


Figure C1—Cumulative opacity distribution functions for the second-overtone band of CO, 5300 to 5500 cm^{-1} .

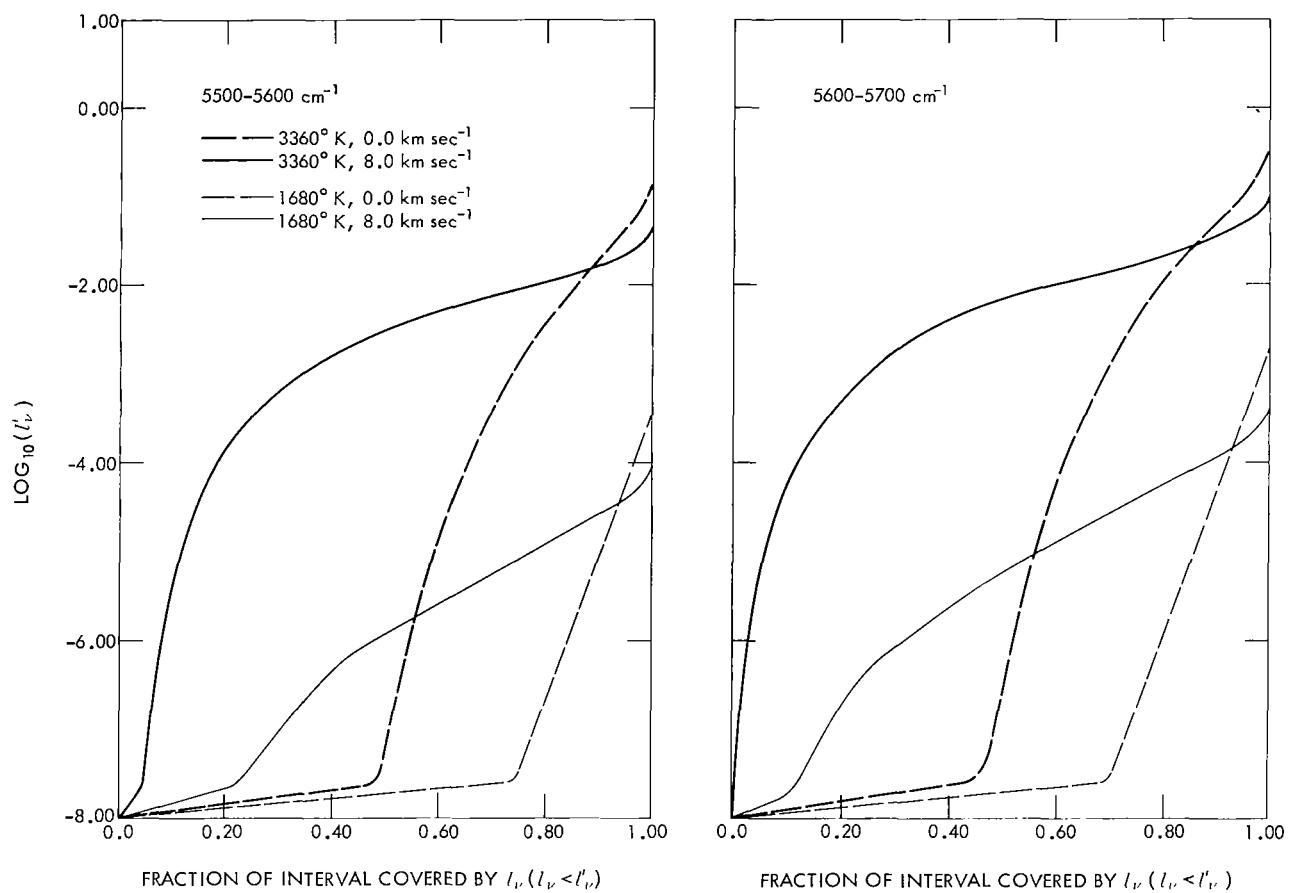


Figure C2—Cumulative opacity distribution functions for the second-overtone band of CO, 5500 to 5700 cm^{-1} .

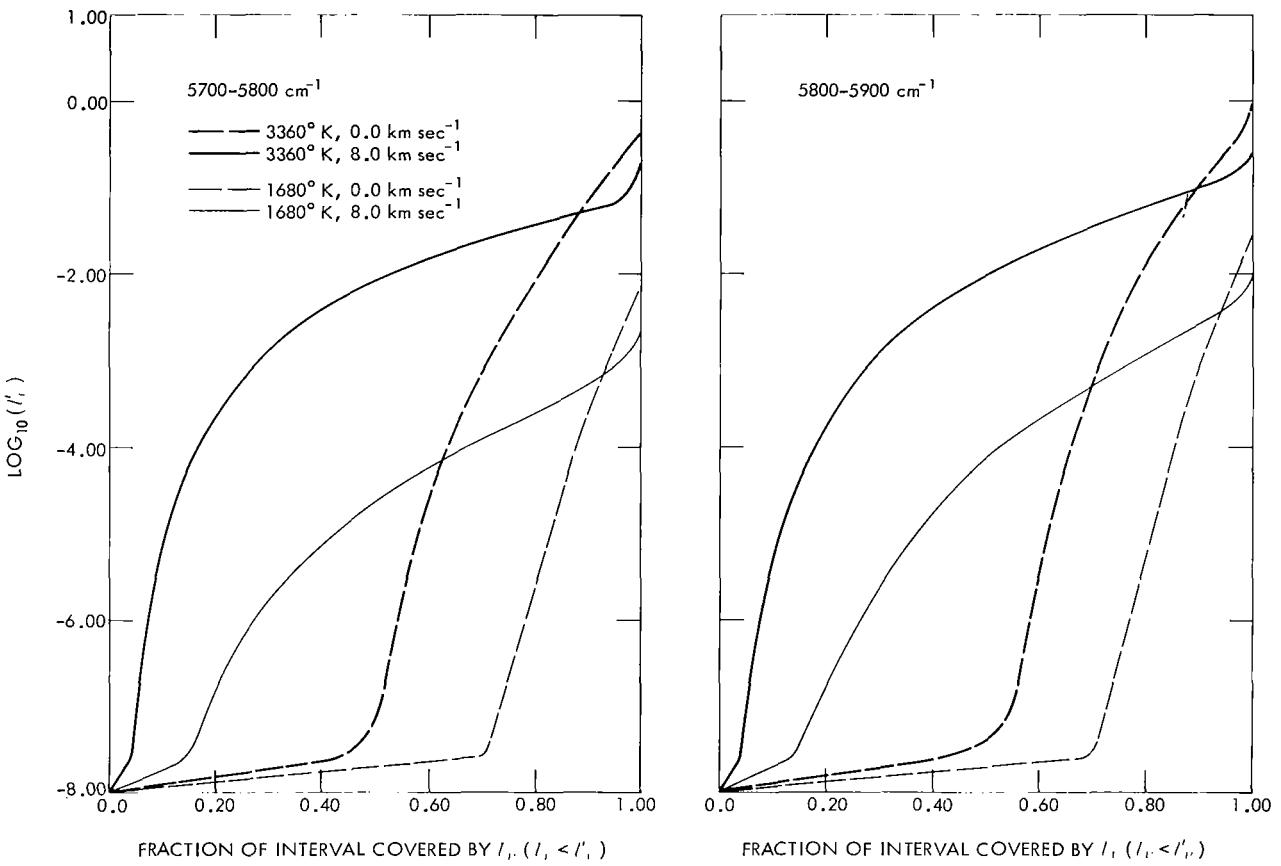


Figure C3—Cumulative opacity distribution functions for the second-overtone band of CO, 5700 to 5900 cm^{-1} .

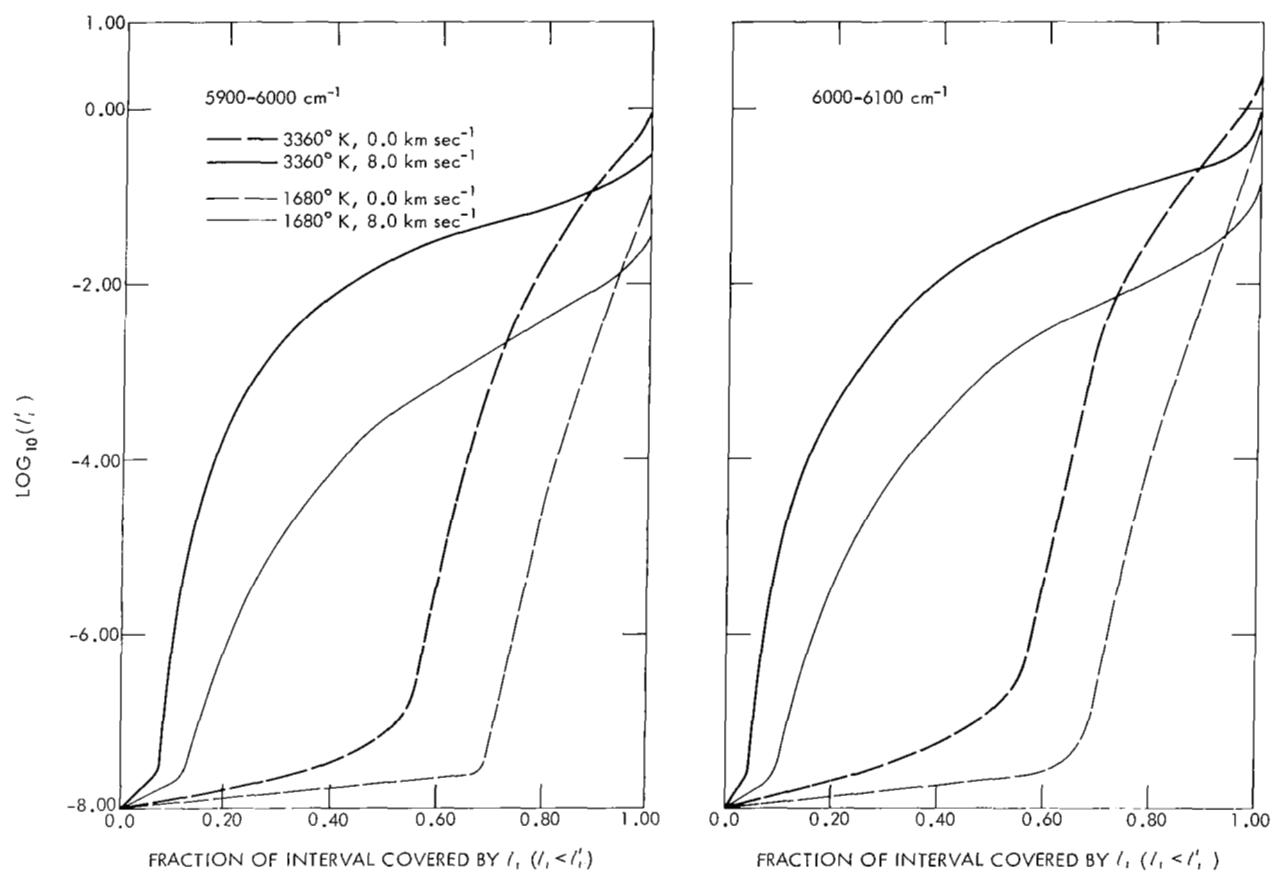


Figure C4—Cumulative opacity distribution functions for the second-overtone band of CO, 5900 to 6100 cm^{-1} .

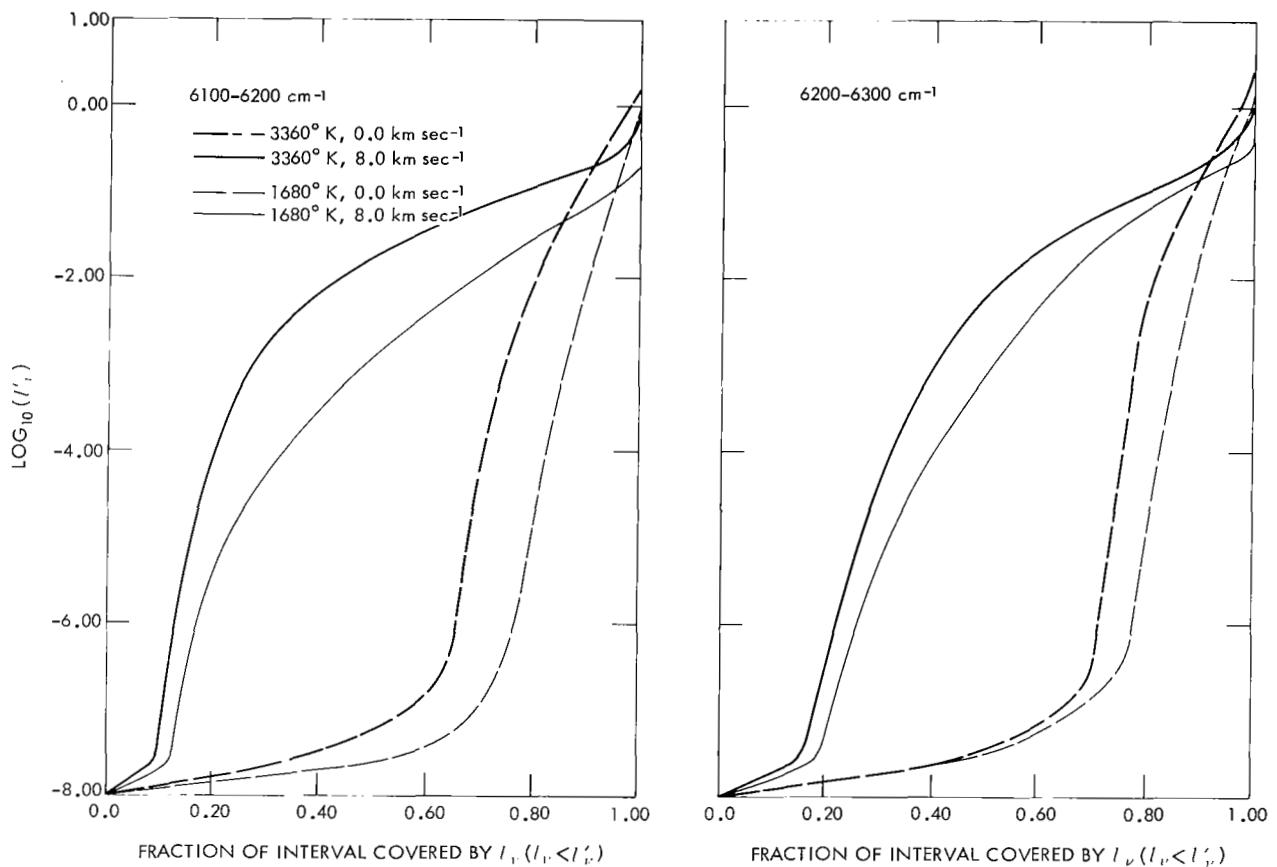


Figure C5—Cumulative opacity distribution functions for the second-overtone band of CO, 6100 to 6300 cm^{-1} .

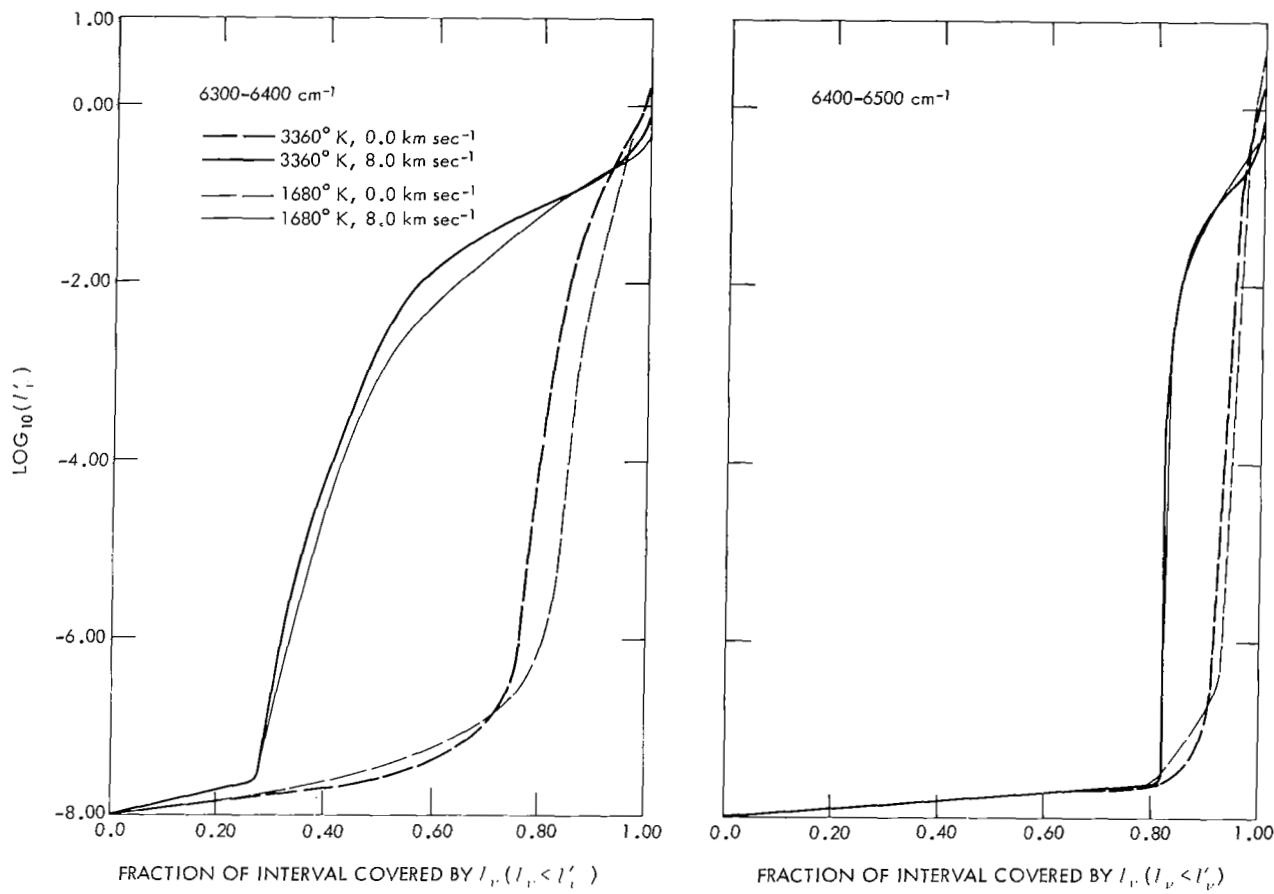


Figure C6—Cumulative opacity distribution functions for the second-overtone band of CO, 6300 to 6500 cm^{-1} .

Appendix D

Numerical Accuracy of Opacity Distribution Functions



Table D1

Numerical Accuracy of Opacity Probability Distribution Function
for $\nu_c = 2250 \text{ cm}^{-1}$, $T = 3360^\circ\text{K}$, $\xi_t = 0.0 \text{ km sec}^{-1}$.

Interval	Mid-point Absorption Coefficient	Log 10 (Absorption Coefficient)	$W_{\nu_c}^{(L_i)}$ $\Delta_j = 0.001 \text{ cm}^{-1}$	$W_{\nu_c}^{(L_i)}$ $\Delta_j = 0.01 \text{ cm}^{-1}$	Ratio
1	2.6993E-08	-7.569	0.0	0.0	1.00
2	4.9167E-08	-7.308	0.0	0.0	1.00
3	8.9557E-08	-7.048	0.0	0.0	1.00
4	1.6312E-07	-6.787	0.0	0.0	1.00
5	2.9713E-07	-6.527	0.0	0.0	1.00
6	5.4121E-07	-6.267	0.0	0.0	1.00
7	9.8580E-07	-6.006	0.0	0.0	1.00
8	1.7956E-06	-5.746	0.0	0.0	1.00
9	3.2707E-06	-5.485	0.0	0.0	1.00
10	5.9574E-06	-5.225	0.0	0.0	1.00
11	1.0851E-05	-4.965	0.0	0.0	1.00
12	1.9765E-05	-4.704	0.0	0.0	1.00
13	3.6002E-05	-4.444	0.547	0.550	1.01
14	6.5577E-05	-4.183	4.496	4.540	1.01
15	1.1945E-04	-3.923	13.066	13.200	1.01
16	2.1757E-04	-3.662	15.001	15.290	1.02
17	3.9630E-04	-3.402	11.089	11.260	1.02
18	7.2185E-04	-3.142	8.231	8.340	1.01
19	1.3148E-03	-2.881	5.934	6.180	1.04
20	2.3949E-03	-2.621	3.936	4.040	1.03
21	4.3623E-03	-2.360	2.501	2.690	1.08
22	7.9459E-03	-2.100	1.456	1.510	1.04
23	1.4473E-02	-1.839	1.130	1.140	1.01
24	2.6363E-02	-1.579	1.105	1.130	1.02
25	4.8019E-02	-1.319	0.971	0.920	0.95
26	8.7466E-02	-1.058	0.947	0.900	0.95
27	1.5932E-01	-0.798	1.055	0.950	0.90
28	2.9019E-01	-0.537	1.215	1.130	0.93
29	5.2858E-01	-0.277	1.358	1.310	0.96
30	9.6279E-01	-0.016	1.293	1.250	0.97
31	1.7537E 00	0.244	1.441	1.350	0.94
32	3.1943E 00	0.504	1.502	1.430	0.95
33	5.8184E 00	0.765	1.558	1.570	1.01
34	1.0598E 01	1.025	1.534	1.540	1.00
35	1.9304E 01	1.286	1.300	1.170	0.90
36	3.5162E 01	1.546	1.199	1.130	0.94
37	6.4047E 01	1.806	1.289	1.270	0.99
38	1.1666E 02	2.067	1.471	1.320	0.90
39	2.1249E 02	2.327	1.466	1.320	0.90
40	3.8705E 02	2.588	1.536	1.480	0.96
41	7.0500E 02	2.848	1.698	1.520	0.90
42	1.2841E 03	3.109	1.618	1.730	1.07
43	2.3390E 03	3.369	1.528	1.460	0.96
44	4.2605E 03	3.629	1.557	1.440	0.92
45	7.7604E 03	3.890	1.562	1.640	1.05
46	1.4135E 04	4.150	1.338	1.260	0.94
47	2.5747E 04	4.411	0.715	0.660	0.92
48	4.6898E 04	4.671	0.357	0.380	1.06
49	8.5424E 04	4.932	0.0	0.0	1.00
50	1.5560E 05	5.192	0.0	0.0	1.00
Computation Time (sec)			952	72	
Number of Mesh Points = 4078					

Table D2

Numerical Accuracy of Opacity Probability Distribution Function
for $\nu_c = 2350 \text{ cm}^{-1}$, $T = 3360^\circ\text{K}$, $\xi_t = 0.0 \text{ km sec}^{-1}$.

Interval	Mid-point Absorption Coefficient	Log 10 (Absorption Coefficient)	$W_{\nu_c}^{(L_i)}$	$W_{\nu_c}^{(L_i)}$	Ratio
			$\Delta_j = 0.001 \text{ cm}^{-1}$	$\Delta_j = 0.01 \text{ cm}^{-1}$	
1	2.6290E-08	-7.580	25.120	25.120	1.00
2	4.5425E-08	-7.343	13.291	13.290	1.00
3	7.8486E-08	-7.105	11.087	11.080	1.00
4	1.3561E-07	-6.868	8.016	8.020	1.00
5	2.3431E-07	-6.630	5.488	5.490	1.00
6	4.0485E-07	-6.393	2.921	2.920	1.00
7	6.9951E-07	-6.155	2.868	2.870	1.00
8	1.2086E-06	-5.918	1.231	1.230	1.00
9	2.0883E-06	-5.680	0.687	0.680	0.99
10	3.6082E-06	-5.443	0.455	0.460	1.01
11	6.2344E-06	-5.205	0.264	0.260	0.98
12	1.0772E-05	-4.968	0.165	0.170	1.03
13	1.8612E-05	-4.730	0.107	0.110	1.03
14	3.2159E-05	-4.493	8.806	8.870	1.01
15	5.5565E-05	-4.255	4.916	4.930	1.00
16	9.6007E-05	-4.018	2.837	2.840	1.00
17	1.6588E-04	-3.780	1.874	1.890	1.01
18	2.8662E-04	-3.543	1.340	1.370	1.02
19	4.9523E-04	-3.305	0.885	0.920	1.04
20	8.5567E-04	-3.068	0.537	0.570	1.06
21	1.4785E-03	-2.830	0.354	0.370	1.05
22	2.5545E-03	-2.593	0.260	0.280	1.08
23	4.4138E-03	-2.355	0.204	0.240	1.18
24	7.6263E-03	-2.118	0.176	0.190	1.08
25	1.3177E-02	-1.880	0.118	0.150	1.27
26	2.2767E-02	-1.643	0.062	0.050	0.81
27	3.9338E-02	-1.405	0.088	0.060	0.68
28	6.7970E-02	-1.168	0.123	0.080	0.65
29	1.1744E-01	-0.930	0.129	0.100	0.78
30	2.0292E-01	-0.693	0.182	0.160	0.88
31	3.5061E-01	-0.455	0.188	0.170	0.90
32	6.0579E-01	-0.218	0.223	0.230	1.03
33	1.0467E 00	0.020	0.297	0.330	1.11
34	1.8085E 00	0.257	0.342	0.300	0.88
35	3.1248E 00	0.495	0.345	0.330	0.96
36	5.3991E 00	0.732	0.326	0.360	1.10
37	9.3288E 00	0.970	0.233	0.200	0.86
38	1.6119E 01	1.207	0.268	0.270	1.01
39	2.7850E 01	1.445	0.265	0.230	0.88
40	4.8120E 01	1.682	0.290	0.280	0.97
41	8.3144E 01	1.920	0.276	0.250	0.91
42	1.4366E 02	2.157	0.276	0.250	0.91
43	2.4822E 02	2.395	0.310	0.270	0.87
44	4.2888E 02	2.632	0.301	0.330	1.10
45	7.4103E 02	2.870	0.320	0.300	0.94
46	1.2804E 03	3.107	0.323	0.310	0.96
47	2.2123E 03	3.345	0.321	0.330	1.03
48	3.8224E 03	3.582	0.287	0.290	1.01
49	6.6045E 03	3.820	0.148	0.130	0.88
50	1.1411E 04	4.057	0.070	0.070	1.00
Computation Time (sec)			597	45	
Number of Mesh Points = 2362					

Appendix E

**Band Origins and Band Heads for the Fundamental,
First-Overtone, and Second-Overtone Bands
of $\text{C}^{12}\text{O}^{16}$, $\text{C}^{13}\text{O}^{16}$, and $\text{C}^{12}\text{O}^{18}$**

Table E1

Fundamental Band.

	Vibrational Transition	Band Origin		R Branch Band-head	
		Wave Number (cm ⁻¹)	Wavelength (micron)	Wave Number (cm ⁻¹)	Wavelength (micron)
$\text{C}^{12}\text{O}^{16}$	1-0	2143.27	4.666	2328.07	4.295
	2-1	2116.78	4.724	2298.44	4.351
	3-2	2090.36	4.784	2268.90	4.407
	4-3	2064.01	4.845	2239.45	4.465
	5-4	2037.72	4.907	2210.10	4.525
	6-5	2011.51	4.971	2180.84	4.585
	7-6	1985.36	5.037	2151.68	4.648
	8-7	1959.29	5.104	2122.36	4.712
	9-8	1933.28	5.172	2093.63	4.776
	10-9	1907.34	5.243	2064.75	4.843
	11-10	1881.47	5.315	2035.96	4.912
	12-11	1855.67	5.389	2007.27	4.982
$\text{C}^{13}\text{O}^{16}$	1-0	2096.07	4.771	2276.85	4.392
	2-1	2070.75	4.829	2248.52	4.447
	3-2	2045.49	4.889	2220.27	4.504
	4-3	2020.29	4.950	2192.12	4.562
	5-4	1995.16	5.012	2164.05	4.621
	6-5	1970.09	5.076	2136.06	4.682
	7-6	1945.08	5.141	2108.17	4.743
	8-7	1920.14	5.208	2080.36	4.807
	9-8	1895.26	5.276	2052.64	4.872
	1-0	2092.12	4.780	2272.68	4.400
$\text{C}^{12}\text{O}^{18}$	2-1	2066.90	4.838	2244.45	4.455
	3-2	2041.73	4.898	2216.32	4.512

Table E2

First-Overtone Band.

	Vibrational Transition	Band Origin		R Branch Band-head	
		Wave Number (cm ⁻¹)	Wavelength (micron)	Wave Number (cm ⁻¹)	Wavelength (micron)
$\text{C}^{12}\text{O}^{16}$	2-0	4260.06	2.347	4360.04	2.294
	3-1	4207.14	2.377	4305.37	2.323
	4-2	4154.37	2.407	4250.84	2.352
	5-3	4101.73	2.438	4196.47	2.383
	6-4	4049.24	2.470	4142.25	2.414
	7-5	3996.88	2.502	4088.18	2.446
	8-6	3944.65	2.535	4034.27	2.479
	9-7	3892.57	2.569	3980.50	2.512
	10-8	3840.62	2.604	3926.91	2.547
	11-9	3788.82	2.639	3873.45	2.582
	12-10	3737.15	2.676	3820.15	2.618
$\text{C}^{13}\text{O}^{16}$	2-0	4166.82	2.400	4264.64	2.345
	3-1	4116.23	2.429	4212.36	2.374
	4-2	4065.77	2.460	4160.23	2.404
	5-3	4015.44	2.490	4108.23	2.434
	6-4	3965.24	2.522	4056.39	2.465
	7-5	3915.17	2.554	4004.68	2.497
	8-6	3865.22	2.587	3953.12	2.530
	9-7	3815.41	2.621	3901.70	2.563
	10-8	3765.72	2.656	3850.42	2.597
	11-9	3716.16	2.691	3799.29	2.632
	12-10	3666.73	2.727	3748.29	2.668
$\text{C}^{12}\text{O}^{18}$	2-0	4159.02	2.404	4256.73	2.349
	3-1	4108.63	2.434	4204.65	2.378
	4-2	4058.37	2.464	4152.73	2.408
	5-3	4008.23	2.495	4100.93	2.438

Table E3

Second-Overtone Band.

	Vibrational Transition	Band Origin		R Branch Band-head	
		Wave Number (cm ⁻¹)	Wavelength (micron)	Wave Number (cm ⁻¹)	Wavelength (micron)
$\text{C}^{12}\text{O}^{16}$	3-0	6350.42	1.575	6417.77	1.558
	4-1	6271.15	1.595	6337.30	1.578
	5-2	6192.10	1.615	6257.04	1.598
	6-3	6113.24	1.636	6177.01	1.619
	7-4	6034.60	1.657	6097.20	1.640
	8-5	5956.16	1.679	6017.59	1.662
	9-6	5877.94	1.701	5938.21	1.684
	10-7	5799.91	1.724	5859.05	1.707
	11-8	5722.10	1.748	5780.10	1.730
	12-9	5644.49	1.772	5701.36	1.754
	13-10	5567.09	1.796	5622.87	1.778
$\text{C}^{13}\text{O}^{16}$	3-0	6212.30	1.610	6278.16	1.593
	4-1	6136.52	1.630	6201.27	1.613
	5-2	6060.93	1.650	6124.53	1.633
	6-3	5985.53	1.671	6048.01	1.653
	7-4	5910.32	1.692	5971.68	1.675
	8-5	5835.31	1.714	5895.54	1.696
	9-6	5760.49	1.736	5819.62	1.718
	10-7	5685.86	1.759	5743.90	1.741
	11-8	5611.42	1.782	5668.38	1.764
	12-9	5537.18	1.806	5593.06	1.788
	13-10	5463.13	1.830	5517.95	1.812

Appendix F

Partition Functions for C¹²O¹⁶, C¹³O¹⁶, and C¹²O¹⁸



Table F1
Partition Functions.

Temperature (°K)	$C^{12}O^{16}$	$C^{13}O^{16}$	$C^{12}O^{18}$
1000	379.22	398.06	399.55
1500	624.45	657.74	660.39
2000	927.01	979.02	983.19
2500	1290.2	1365.3	1371.3
3000	1715.7	1818.2	1826.4
3500	2204.7	2339.1	2350.0
4500	3378.0	3589.7	3606.8

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